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GOVERNMENT NOTICE

DEPARTMENT OF WATER AFFAIRS AND FORESTRY**No. 1357****14 December 2001****FIRST EDITION ENVIRONMENTAL IMPLEMENTATION AND MANAGEMENT PLAN IN
TERMS OF CHAPTER 3 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998
(ACT NO 107 OF 1998)**

The Department of Water Affairs and Forestry must in terms of section 11(3) of the National Environmental Management Act, 1998 (Act No 107 of 1998) prepare a consolidated environmental Implementation and management plan, as the Department has activities and functions that both impact and manage the environment.

The Department hereby publishes in terms of section 15(2)(b) of the National Environmental Management Act, 1998 the environmental implementation and management plan as recommended by the Committee for Environmental Co-ordination and adopted by this Department, and as set out in the Schedule hereto.

In terms of sub-section 15(2)(b) the plan becomes effective from the date of publication.



Sgn AM Muller

Director-General, Department of Water Affairs and Forestry

Date: 29 November 2001

SCHEDULE

DEPARTMENT OF WATER AFFAIRS AND FORESTRY FIRST EDITION ENVIRONMENTAL IMPLEMENTATION AND MANAGEMENT PLAN

EXECUTIVE SUMMARY

INTRODUCTION

The Department of Water Affairs and Forestry (DWAF) must in terms of Chapter 3, section 11(3), of the National Environmental Management Act, No 107 of 1998 (NEMA) submit a consolidated environmental implementation and management plan (EIMP), as the Department has activities and functions that both impact and manage the environment.

The primary purpose of DWAF's First Edition EIMP is to assist the Committee for Environmental Co-ordination (CEC) to align DWAF's environmental management policies and functions with that of other Government Departments and *vice versa*. Particular emphasis is placed on the prioritisation of functions that significantly affect the environment in order to promote sustainable development.

DWAF recently put in place a number of policies and legislation affecting its three core functions, namely; Forestry, Water Resource Management (including Planning and Development) and Water Services. The Department is further also currently undergoing institutional and organisational restructuring following these policy and legislative reviews. The above mentioned process will consequently enable the Department to respond effectively and efficiently to the challenges of the post-1994 political, administrative, and socio-economic paradigm shift.

Furthermore, the process of re-alignment and restructuring involves not only the structural re-engineering of the functioning of the Department as a whole, but also the implementation of environmental management principles and related functions.

The aforementioned implies that DWAF's First Edition EIMP will by necessity be conceptual and strategic indicating; the Department's policy and legislative framework, its priority environmental functions and co-operative relationships and arrangements.

The EIMP document and process will impact DWAF in many ways. For example: inform the current restructuring processes; development and implementation of an environmental management framework for the Department; assist in the process towards measuring and monitoring DWAF's environmental performance; as well as the outcome and updating of policies and strategies to ensure effective sustainable environmental management of South Africa's water and forestry resources.

LEGISLATIVE FRAMEWORK

The Departmental vision and mission is both holistic and environmental in nature and is founded on the new directions and perspectives brought about by the promulgation of nationally applicable environmental policies and laws. In particular the **Constitution of the Republic of South Africa (Act, No. 108 of 1996)**, with reference to sections 24 (on environment) and 27 (on water) has been addressed.

The new constitutional requirements necessitated the development of water and forestry policies and legislation to mirror and facilitate the transformation of the South African Government, and in particular the approach to environmental and resource management.

The requirement for transformation and changes in approach mentioned above resulted in the Department having had set in place, by the end of 1998, a number of new policies and laws. These jointly heralded fundamental changes in the ways in which South Africa's water and forest resources, and the provision of water-related services, are to be managed and regulated and include:-

Water Resource Management:

- The White Paper on a National Water Policy, April 1997.

- The National Water Act, No 36 of 1998 (NWA) assented to and signed by the President on 20 August 1998.

Water Services:

- The White Paper on Community Water Supply and Sanitation, November 1994.
- Draft White Paper on Sanitation, 1996.
- The Water Services Act, No. 108 of 1997.

Forestry:

- The White Paper on Sustainable Forest Development in South Africa, 1996.
- The National Forest Act, No. 84 of 1998 (NFA).
- The National Veld and Forest Fire Act, No. 101 of 1998 (NVFFA).

Consequently the Department of Water Affairs and Forestry is mandated to:

- ensure that South Africa's **water resources** are protected, used, developed, conserved and controlled in an integrated, sustainable, equitable, efficient and optimal manner, for the benefit of all persons;
- create a developmental regulatory framework within which **water services** (water supply and sanitation) and access to water services can be provided;
- ensure effective, sustainable, professional and equitable access to water services for all;
- implement schemes in the rural areas as well as operation and maintenance of approximately 400 large schemes inherited from the former homelands;
- ensure that South Africa's **forest resources** (indigenous and commercial) are protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all. In future once the Provincial government have developed sufficient expertise, resources and administrative capacity, the Minister may assign the responsibility of managing indigenous forests; and
- prevent and combat **veld, forest and mountain fires** throughout the country and thereby limit and reduce the damage and losses caused by fires to life, fixed property, infrastructure, moveable property, stock, crops, flora and fauna and veld in South Africa.

DWAF's PRIORITY ENVIRONMENTAL FUNCTIONS, STRATEGIES AND RESOURCES

Stemming from DWAF's mandate are the following priority environmental impact and management functions for each functional area as well as strategies, processes and resources that focus on implementation activities. These are briefly discussed below.

It is, however, important to note that DWAF's priority functions have not been ranked or weighted in any manner. The priority functions are merely presented as an integrated group for each of the functional areas of environmental significance. These are all of equal and key importance in realising DWAF's integrated legislated mandates.

DWAF's **impacting activities** (Environmental Implementation Plan - EIP functions) are those functions that directly contribute to significant impact / effect on the environment and include:

- functions or interventions required by the Department in order to make water available for use on a bulk scale through water resource infrastructure planning, development and operation;
- the implementation of water services programmes and projects; and
- implementation responsibilities related to commercial and community forestry that contribute to impacts on the environment, even though these functions are changing toward a regulatory and intervention nature.

DWAF's **management functions** (Environmental Management Plan - EMP functions) are those functions that are used to manage the environment (in this case both water and forestry resources) as well as the impacts of external parties on these resources and include:

- functions related to the protection of water resources, regulation of water use and the development of an appropriate policy and strategy framework for water resource management;
- creating an enabling environment (i.e. the development of policy and strategy), planning water service provision, monitoring and auditing of activities undertaken by water service institutions, regulation and where needed, intervention; and
- ensuring sustainable management of natural forests as well as fire prevention and management.

The Department's 2000/2001 and 2001/2002 Strategic Plans can be consulted for detailed business plans for the various components.

The Strategic Plans describe the Department's legally mandated core functions and medium-term key objectives at a strategic level. They also describe the core functions and responsibilities, associated activities, key outputs and targets for each distinct functional unit in the Department by means of summary business plans for the relevant financial year.

The most significant strategies required to realise the foregoing functions include:

Water Resource Management Strategies:

- the programme for implementing the NWA;
- National Water Resource Strategy (NWRS); and
- Catchment Management Strategies (CMSs).

The NWRS is an overarching national strategy and the CMSs are strategies at a water management area / regional scale.

Water Services Strategies:

- the Strategic Framework for Water Services Support provide a framework within which the water services support function of the Department would be carried out, promoting co-operative governance and effective service delivery; and
- strategies associated with providing guidance regarding the preparation of Water Service Development Plans (i.e. strategic plans prepared at local government level addressing the provision of water services).

Forestry Strategies:

The National Forestry Action Plan, September 1997 which describes specific strategies to implement the functions and responsibilities in respect of the South African forestry sector.

To date DWAF's mandate and functions focus on sustainable management, control, use and development of water and forestry resources. This, in effect, implies that in varying degrees, all of the Department's resources are geared towards environmental management of South Africa's water and forestry resources.

However, the revised water and forestry legislation has imposed new and extensive responsibilities on DWAF, which require a different structure, professional profile and composition of skills and capacity than DWAF has hitherto had. DWAF is currently engaged in transformational processes in response to these Acts making it difficult and in appropriate to report at this stage on precise particulars regarding availability and utilisation of appropriately trained and experienced staff, infrastructure and operational capacity, as well as budgetary provisions.

Nonetheless, for purposes of this document, the Strategic Plans contain information relevant to DWAF's short to medium-term resources for implementation (i.e. budget allocations, organisational structure, and human resources for the relevant financial year).

Given the above and with an understanding of the Department's wide range of responsibilities and limited resources, additional funding and assistance was required in order to achieve DWAF's mandate and objectives. Consequently international donor funding and technical assistance plays a critical role in co-ordinating functions and assists in achieving co-operative governance of DWAF activities.

CO-OPERATIVE GOVERNANCE

The need and importance of co-operative governance within the environmental sector has been recognised in NEMA and section 41 of the Constitution which provides the principles and foundations of co-operative Government and intergovernmental relations.

NEMA has also provided the basis for co-operative governance in respect of environmental management through the CEC and the drafting and formalisation of environmental implementation and management plans.

Due to the transitional organisational and institutional restructuring environment in which DWAF is currently operating, the EIMP will only broadly address the co-operative mechanisms and arrangements that support

alignment around environmental management **internally** within the Department and **externally** with other spheres of Government and stakeholders. The document will therefore focus mainly on identifying the areas of co-operation.

DWAF's functions that relate to policy, strategy and regulatory work are undertaken at the Pretoria Head Office and the Regional Offices perform implementation work. DWAF is a national competency and thus does not have provincial counterparts.

There are nine regional offices that manage water-related issues. These offices address both water resource management and water services, with one in each Province.

Three Forestry Regional Offices deal with forest issues in the northern, central and southern areas of the country.

Internal co-ordination is achieved between Head Office and the Regional Offices (Regions) through the sharing of the responsibility for regional activities among Head Office staff and the staff of the Regions in accordance with a structured matrix management system.

Furthermore, the Regional Chief Directors and Directors are represented on Departmental Management Committees.

The Department expends significant effort in **liaising with other Departments** in all spheres of Government including national and provincial counterparts of the Department of:-

- Agriculture;
- Arts, Culture, Science and Technology;
- Education;
- Environmental Affairs and Tourism;
- Land Affairs;
- Mineral and Energy Affairs;
- Labour;
- Public Works;
- Transport;
- Provincial and Local Government;
- Public Enterprises;
- Trade and Industry; and
- Housing,

to ensure that its programmes and activities are co-ordinated and, where necessary, integrated with other relevant government programmes.

The Department has also established formal and informal links with **non-governmental structures** at provincial and local level to ensure full participation and involvement in decision-making.

Furthermore, due to policy and legislative requirements, participation and capacity building processes are implemented and is an illustration of DWAF's commitment to co-operative governance as well as compliance with NEMA's section 2 principles.

It should, however, be noted that in view of the extent, complexity and transitional nature of DWAF's functions as well as the compounding linkages with other departments and stakeholders that all the arrangements and linkages could not be evaluated nor prioritised in detail in the First Edition EIMP.

COMPLIANCE WITH NEMA PRINCIPLES

NEMA stipulates that compliance be described in terms of the following:-

- the process DWAF will follow to ensure that its own policies and implementation strategies will comply with the NEMA principles and how DWAF will ensure that its functions are implemented to ensure compliance;
- the priorities for compliance with DWAF's policies and legislation by other organs of state and stakeholders; and

- DWAF's strategies to ensure and measure compliance with its policies by other organs of state and stakeholders.

DWAF's compliance and performance regarding NEMA's requirements:

Compliance with the NEMA principles was assessed in terms of DWAF's mandate, policy and legislative framework. It was found that in all areas DWAF complies with the NEMA principles and that there is harmony between water and forestry policies and legislation, and the environmental principles as set out in NEMA.

It remains, however, for DWAF in future editions to further evaluate the Departments' compliance in terms of its activities, programmes and plans to these principles. In addition it will need to indicate how DWAF's functions, activities, policies and implementation strategies can and should be further realigned with these principles, and to ensure the application and implementation thereof.

Measuring the Department's environmental performance in respect of the above can only be achieved once suitable sustainability indicators, monitoring and auditing protocol, for comprehensive assessment have been developed. The Environmental Management Framework (see below) process will among others be addressing these issues.

Furthermore, reporting in respect of existing processes will be employed to assist the Department in this regard, in particular reporting regarding implementation of the Strategic Plan as well as the DWAF's Annual Report initiative.

External compliance to DWAF's legislation:

DWAF's environmental priority management functions indicate the priorities related to the DWAF's policies and legislation to which external institutions and stakeholders must comply.

However, the Department is not at this stage in a position to report on either the extent to which compliance is achieved, nor on the details of how DWAF will ensure compliance. Implementation of DWAF's legislation is still in its infancy and monitoring and auditing strategies need to be further developed, tested and implemented.

PROMOTING ENVIRONMENTAL MANAGEMENT

Prior to NEMA and the current environmental impact assessment regulations, DWAF applied and implemented the 1992 Department of Environmental Affairs' Integrated Environmental Management (IEM) guidelines, during project development and implementation. In addition DWAF also formulated its own procedure for the practical application of IEM and produced a manual to assist the process in DWAF.

In order to align DWAF's activities and functions with the principles and Chapter 5 (IEM) of NEMA and other relevant environmental legislation and to promote environmental compliance and performance in the Department, the DWAF IEM procedures will be revised. These are in the process of being redrafted, strengthened and customised to cater for DWAF requirements. In addition an Environmental Management Framework (EMF) will be developed and implemented.

The DWAF IEM procedures will be an internal and external (with in particular DEAT) consultative and participatory process. Detailed investigations into the Department's functions impacting and managing the environment including plan, programme and project level will be initiated. During this process the inputs as well as the co-operative relationships with external partners will be further detailed and formalised through dialogue and the creation of working arrangements with relevant co-operative partners.

RECOMMENDATIONS

The First Edition EIMP should be viewed as the first step in an ongoing process of working towards sustainable environmental management within the DWAF and not as an endpoint. The document sets the background against which further development and improvement regarding environmental management will take place.

During the compilation process of the EIMP, certain issues and recommendations and opportunities for improvement were identified.

The Department also seeks to further align its activities with the specific environmental objectives/goals of NEMA. This will be addressed via processes associated with the development of the EMF and other mentioned strategies, and include *inter alia*:

- co-operation with other organs of state;
- interaction of government procedures and processes;
- rationalising co-operative arrangements and relationships;
- environmental decision making;
- environmental impact assessments;
- environmental extension officers;
- environmental management communication and reporting strategy;
- internal restructuring and organisation;
- environmental performance monitoring and auditing;
- continuity in respect of environmental management practice and support;
- environmental training and capacity building;
- incentives for compliance;
- addressing disaster management in environmental management plans; and
- managerial support for implementation of environmental recommendations and requirements.

In view of the strategic approach adopted by the First Edition EIMP as well as the currently transitional and complex nature of Departmental processes and strategies, it is not appropriate to provide specific time frames and resources for the proposals and recommendations forthcoming from this edition. This document does, however, provide the undertaking that where recommendations are not currently being addressed, that the Department will ensure they will be considered and incorporated.

INDICATORS

DEAT has initiated a participatory process for the development of sustainable development indicators for purposes of and application in the National Sustainable Development Strategy, the National State of the Environment Report (NSoER), as well as measuring Departmental implementation of the Environmental Implementation and Management Plans.

DWAF will assist in the above through the review of use and application of any currently employed indicators and where required, develop more appropriate "resource" specific indicators and other measurements to evaluate sustainability and environmental performance.

At present the Department uses a wide range of indicators to measure and monitor the progress of its work. Many of the indicators are social, economic and ecological in nature but have not been specifically designed with environmental sustainability reporting in mind.

Further to the above, a number of indicators relevant to DWAF's mandate are included in the 1998 report to the United Nations Commission on Sustainable Development (UNCSD) and the results from testing of the CSD Indicators of Sustainable Development in South Africa. The NSoER, 1999 also contains indicators which addresses sustainability. These indicators are in varying degrees of use for which the efficacy will still need to be investigated.

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ACRONYMS

CBO	Community Based Organisation
CEC	Committee for Environmental Co-ordination
CMA	Catchment Management Agency
CMS	Catchment Management Strategy
CSD	Commission for Sustainable Development
CSIR	Council for Scientific and Industrial Research
DA	Department of Agriculture
DACST	Department of Arts, Culture, Science and Technology
DANCED	Danish Co-operation for Environment and Development
DE	Department of Education
DEAT	Department of Environmental Affairs and Tourism
DLA	Department of Land Affairs
DM	District Municipality
DME	Department of Mineral and Energy Affairs
DOL	Department of Labour
DOPW	Department of Public Works
DOT	Department of Transport
DP&LG	Department of Provincial and Local Government
DPE	Department of Public Enterprises
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
ECA	Environment Conservation Act, No. 73 of 1989
EIMP	Environmental Implementation and Management Plan
EIP	Environmental Implementation Plan
EMF	Environmental Management Framework
EMP	Environmental Management Plan
HYCOS	Hydrological Cycle Observing System
IEM	Integrated Environmental Management
KOBWA	Komati Basin Water Authority
M&E	Monitoring and Evaluation
MANCO	(DWAF) Management Committee
MTEE	Medium Term Expenditure Estimates
MTEF	Medium Term Expenditure Framework
NaSCO	National Sanitation Co-ordination Office
NEMA	National Environmental Management Act, No. 107 of 1998
NFA	National Forest Act, No. 84 of 1998
NFAP	National Forestry Action Plan
NGO	Non-Governmental Organisation
NSoER	National State of the Environment Report
NSP	White Paper on Sanitation, 1996 (Draft)
NSTT	National Sanitation Task Team
NVFFA	National Veld and Forest Fire Act, No.101 of 1998
NWA	National Water Act, No. 36 of 1998

NWAC	National Water Advisory Committee
NWP	White Paper on a National Water Policy for SA, April 1997
NWRS	National Water Resource Strategy
PCC	Project Co-ordination Committee
PDH&LG	Provincial Department of Housing and Local Government
PFMA	Public Finance Management Act, No. 1 of 1999
PMC	Project Management Committee
PPC	Public Participation and Communication
RDM	Resource Directed Measure
RQO	Resource Quality Objective
SABS	South African Bureau of Standards
SADC	Southern Africa Developing Community
SADC-WRTC	SADC Water Resource Technical Committee
SADC-WSCO	SADC Water Sector Co-ordination Unit
SAFCOL	Southern African Forestry Company Limited
SASA	South African Sugar Association
SAWINET	Southern African Water Information Network
SBC	Source Based Control
SEA	Strategic Environmental Assessment
SFRA	Stream Flow Reduction Activities
SFRA LAAC	SFRA Licence Assessment Advisory Committee
TINWA	Task Team for the Implementation of the National Water Act
UNCSD	United Nations Commission for Sustainable Development
WC/DM	Water Conservation and Demand Management
WMA	Water Management Area
WMI	Water Management Institution
WPSFD	White Paper on Sustainable Forest Development in SA, March 1996
WRC	Water Research Commission
WRM	Water Resource Management
WRMC	Water Resource Management Committee
WS	Water Services
WSA	Water Services Authority
WSAct	Water Services Act, No. 108 of 1998
WSDP	Water Services Development Plan
WSMC	Water Services Management Committee
WSP	Water Services Provider
WUA	Water User Association

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION AND PURPOSE OF DOCUMENT

The Department of Water Affairs and Forestry (DWAF) must in terms of Chapter 3, section 11(3), of the National Environmental Management Act, No 107 of 1998 (NEMA) submit a consolidated environmental implementation and management plan (EIMP). This is due to DWAF performing functions that both impact and manage the environment.

Water and forestry are part of a highly inter-related environment (land, air and water - water is inextricably linked to all aspects of the environment and associated living organisms that form a part of it). The environment and its components are, however, managed by different Departments and spheres of Government. This highlights the critical importance of co-operative governance in order to enhance and improve effective sustainable management of water and forestry resources.

Documentation of the EIMP and co-operative governance in the environment is underpinned by the requirements of the Department of Environmental Affairs and Tourism's *Guidelines for Preparation of the First Edition Environmental Implementation and Management Plans (November 1999)*. These guidelines indicate that the primary purpose of an EIMP is to assist the Committee for Environmental Co-ordination (CEC) to align (i.e. minimise duplication and promote consistency) the environmental management policies and functions of various Government Departments, with particular emphasis on prioritisation of functions that "significantly affect the environment". This is further emphasised by the NEMA Chapter 3 focus (Procedures for Co-operative Governance), insofar as it supports the concept of co-operative governance in the environmental management sector, so as to promote sustainable development.

DWAF recently put in place a number of policies and legislation affecting its three core functions, namely; Water Resource Management (including Planning and Development), Water Services, and Forestry. DWAF is currently undergoing institutional and organisational restructuring following these policy and legislative reviews (refer Chapter 2) and to enable them to respond effectively and efficiently to the challenges of the post-1994 political, administrative, and socio-economic demands.

The revised water and forestry policy and legislation require DWAF to perform additional new functions that were previously not part of DWAF's mandate, as well necessitate that certain existing functions be modified, transferred, or delegated to agencies, authorities or associations, to ensure effective service delivery.

Associated with wide-ranging initiatives to operationalise the above, is the requisite alignment of organisational culture and management structures in line with the broader public sector transformation programme and the principles of *Batho Pele*.

This process of re-alignment, restructuring and changes thus involves not only implementing environmental management principles and related functions, but also the structural re-engineering of the functioning of the Department as a whole.

The foregoing is an incremental development and implementation process – first implementation strategies must be developed and then the implementation itself must take place. Allowances must therefor be made for changing circumstances and the implications thereof.

Implementing the new legislative framework will also involve establishing and reviewing a range of complex co-operative relationships. This will be addressed through current processes and will incrementally be organised and re-organised.

The above mentioned implies that DWAF's First Edition EIMP will by necessity be conceptual and strategic indicating the following: the Department's policy and legislative framework; its priority environmental functions and co-operative relationships; approaches; opportunities and challenges.

The EIMP document and process will impact the Department in the following ways. Inform the current restructuring processes, allow the development and implementation of an environmental management framework for the Department (refer Chapter 6), assist in the process towards measuring and monitoring the DWAF's environmental performance as well as the outcome and updating of policies and strategies. This is in order to ensure effective sustainable environmental management of South Africa's water and forestry resources.

1.2 STRUCTURE OF DOCUMENT

In view of the foregoing section, the document is thus structured as follows:-

- **Chapter 2** describes DWAF's legislative mandate, three core functional areas (i.e. Water Resource Management, Water Services and Forestry) and the purpose and the associated key objectives for each;
- **Chapter 3**, the priority environmental impact and management functions for each functional area as well as the strategies, processes and resources focused on the implementation (or roll-out) of the policy, legislation and organisational-institutional restructuring;
- **Chapter 4** addresses the identification of arrangements, linkages and need for alignment and co-operation between Departments and spheres of Government to assist the CEC;
- in **Chapter 5** compliance to the NEMA principles is assessed in terms of DWAF's mandate and legislative framework;
- **Chapter 6** addresses the promotion of Integrated Environmental Management objectives;
- **Chapter 7** concludes with further recommendations, key issues and opportunities for improvement in respect of environmental management; and
- **Annexure 1** addresses the need for indicators to be developed to measure DWAF's environmental performance and compliance in terms of meeting projected targets and objectives.

CHAPTER 2: DWAF'S LEGISLATIVE FRAMEWORK

This Chapter will address the Department's legislative framework, the drivers that prompted the changes in current policies and legislation, its mandated functional areas, key objectives and current vision and mission.

2.1 DWAF'S VISION AND MISSION

2.1.1 VISION

The Department has a vision of:-

- a democratic, people centred nation working towards human and environmental rights, justice, equity and prosperity for all;
- a society in which all people enjoy the benefits of clean water and hygienic sanitation services;
- water used carefully and productively for economic activities which promote the growth, development and prosperity of the nation;
- a land in which our natural forests and plantations are managed in the best interest of all;
- people who understand and protect South Africa's natural resources so as to make them ecologically stable and safeguard them for current and future generations;
- a Department that serves the public loyally, meets its responsibilities with energy and compassion and acts as a link in the chain of integrated and environmentally sustainable development; and
- development and co-operation throughout and participating in the African Renaissance.

2.1.2 MISSION

DWAF's mission is to serve the people of South Africa by:-

- conserving, managing and developing our water resources and forests in a scientific and environmentally sustainable manner in order to meet social and economic needs of South Africa, both now and in the future;
- ensuring that water services are provided to all South Africans in an efficient, economic and sustainable way;
- managing and sustaining forests, using the best scientific practice in a participatory and sustainable manner;
- educating the people of South Africa on ways to manage, conserve and sustain our water and forest resources;
- co-operating with all spheres of Government, in order to achieve the best and most integrated development in our country and region; and
- creating the best possible opportunities for employment, eradication of poverty and promotion of equity, social development and democratic governance.

The Departmental vision and mission is both holistic and environmental in nature and is founded on the new directions and perspectives brought about by the promulgation of nationally applicable environmental policies and laws. In particular the **Constitution of the Republic of South Africa (Act, No. 108 of 1996)**, with reference to sections 24 (on environment) and 27 (on water) has been addressed.

The new constitutional requirements necessitated the development of water and forestry policies and legislation to mirror and facilitate the transformation of the South African Government, and in particular the approach to environmental and resource management.

2.2 LEGISLATIVE FRAMEWORK, CORE FUNCTIONAL AREAS AND KEY OBJECTIVES

The requirement for transformation and changes in approach outlined above resulted in the Department having set in place, by the end of 1998, a number of new policies and laws (refer Figure 1). These jointly heralded fundamental changes in the ways in which South Africa's water and forest resources, and the provision of water-related services, are managed and regulated.

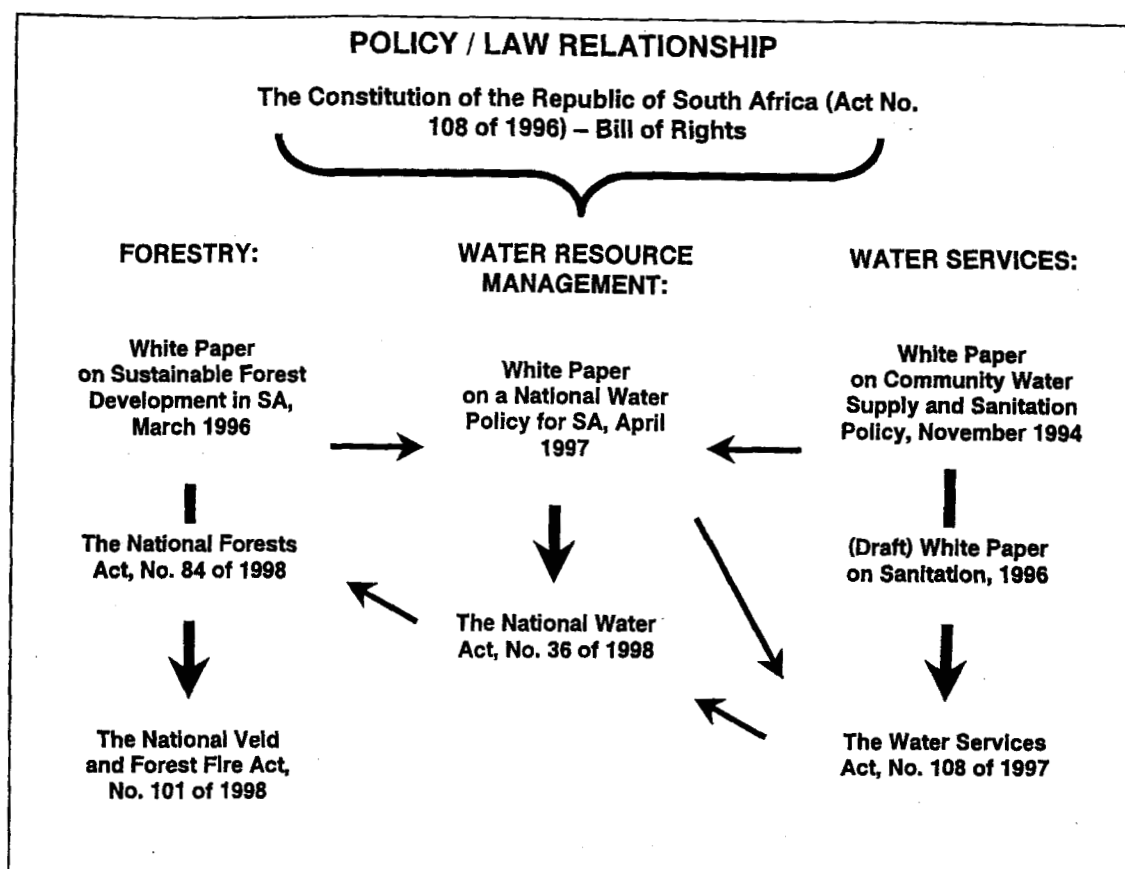


Figure 1: DWAF's legislative framework

The following sections will illustrate DWAF's policy and legislated framework, mandated functions and responsibilities stemming from the foregoing as well as the Department's key objectives in respect of its functional areas, referring to a medium-term (four to five year) time horizon.

It should be noted that much of the work associated with the achievement of the foregoing objectives is already underway. Some aspects will be completed during 2000/2001, whilst others will continue into the following period and beyond.

The Department's 2000/2001 and 2001/2002 Strategic Plans can be consulted for detailed business plans and progress for the various components.

These plans are prepared annually by DWAF in terms of the requirements of the Public Finance Management Act, No. 1 of 1999 (PFMA) and the Public Service Regulations of 1999, Part III, section B.1. One of these requirements is that these plans must incorporate Medium Term Expenditure Framework (MTEF) inputs. In addition to describing the Department's legally-mandated core functions and medium-term key objectives at a strategic level, it describes the core functions and responsibilities, associated activities, key outputs and targets for each distinct functional unit in the Department. This is done by means of summary business plans for the relevant financial year.

2.2.1 WATER

In 1994, the South African Government was confronted with a situation in which the majority of its people had been excluded from land ownership and therefore were denied direct access to water for productive use, and also to the benefits from the use of the nation's water resources. Democracy demanded that the policy on national water use and the water law be reviewed.

Furthermore and as previously noted, South Africa's Constitution required this review on the basis of fairness and equity, values that are enshrined as cornerstones of South Africa's new society. Other pressing reasons included:-

- the development of South Africa's society, a growing population, and the legitimate demands of the disadvantaged majority for access to water, which placed new demands on limited resources; and
- the way that water was used was not ideal and therefore the optimal social, economic or ecological benefits that could be obtained from natural resources were not achieved.

A process was consequently set in place to address the above. The first outcome was the production of the *Fundamental Principles and Objectives for a New Water Law in South Africa*.

These principles clarified the role and objectives of the State in the management of the nation's water and were approved by Cabinet in November 1996. It further guided policy and law reform in respect of **management of water as a natural resource** (refer 2.2.1.1) and **water services** (refer 2.2.1.2).

2.2.1.1 WATER RESOURCE MANAGEMENT

Historically, the Department's major water resource management activity has been the development of systems to store and transport water. The construction and operation of large dams, tunnels and pipelines, the local construction of systems of weirs, pump stations and irrigation canals, have symbolised what for many years was the business of water management.

The limits to water availability did, however, become more obvious. Further it was recognised that the sustainability of South Africa's water resources is threatened both in terms of quantity and quality. Misuse of water resources has resulted in damage to aquatic ecosystems and unless the water usage pattern is changed, future water demand will greatly exceed the available fresh water resources. Damage to or destruction of aquatic ecosystems is having significant negative social and economic impacts.

Furthermore, under the 1956 Water Act, water was managed for the provision of a very limited section of the population, mainly irrigation, which resulted in depriving a large sector of the community of basic water supply and water for development.

The new policies introduced a significant change in the approach to water resource management. The emphasis shifted from the construction of major structures to alleviate water shortages, to a more balanced approach of equity in access to water as well as water conservation and demand management, to ensure the sustainable use of water resources.

Further to this, it is acknowledged that if water and the services provided by water resources, are to be available to people on an equitable basis in the long term, water resources then also require protection.

These perspectives were incorporated in current water policy and legislation (refer Table 2: Chapter 5) as fundamental principles namely **equity in access to water**, the **optimal beneficial use of water**, and the principle of **sustainability**, together with the recognition that integrated and participatory management of water resources are most appropriate to achieve this.

It is important to note that South Africa's water policy is not aiming to prevent impacts to the water environment at all costs. This will not allow the country to achieve much-needed social and economic growth. Rather the key is to balance long-term protection of water resources with short- and medium-term demands for using it. Thus, the challenge is to obtain the right balance between using and protecting water resources. To achieve this balance, there must be some water for everyone (equity), forever (sustainability).

The National Water Act is the legal instrument to help give effect to the above criteria and the country's water policy. The principles of sustainability and equity run throughout the many components of the Act. For example the Act specifies eleven kinds of water use (refer section 21 of the National Water Act). But at the same time, the Act requires that water resources must not be irreversibly damaged while they are being used. This is where the Act makes provision for resource-directed measures, as well as source-directed controls (refer 3.1.2.1). Together, these two sets of measures must specify the levels of protection required and the controls and management practices necessary to protect water resources (refer 3.1.1).

The resource protection imperatives (including conservation and demand management) must thus be balanced with the resource development imperatives to achieve sustainable utilisation of the resource, during the development of integrated strategies for water resource management through stakeholder participation.

The Act further provides for the proposed establishment of water management institutions (refer 4.2.2.1) which will place greater responsibility on local stakeholders, and similarly requires greater co-operation and co-ordination (co-operative governance) at a regional level, particularly in terms of managing the environment (including the land and air impacts on water).

Water Resource Management Policies and Legislation:

The major and overarching Water Resource Management policies and legislation thus include, in dated order (refer to Figure 1):

- 1). The White Paper on a National Water Policy, April 1997.
- 2). The National Water Act, No 36 of 1998 (NWA) assented to and signed by the President on 20 August 1998.

Water Resource Management mandate:

The Department of Water Affairs and Forestry is mandated by the above legislation to ensure that South Africa's water resources are protected, used, developed, conserved and controlled in an integrated, sustainable, equitable, efficient and optimal manner, for the benefit of all persons.

National Government, through the Minister of Water Affairs and Forestry, is the public trustee of the nation's water resources, with powers to regulate the use, flow and control of all water in the Republic while promoting environmental values. The Act recognises that:-

- all people have basic needs for water for drinking and hygiene and these needs must at all times be satisfied;
- South Africa needs to share water with other countries in shared watercourses; and
- water must be used to promote long-neglected social and economic development in the country.

The ultimate aim of Water Resource Management (WRM) thus is to achieve sustainable use of water, not total protection. Sustainability meaning that three aspects must be in balance:-

- social development and equitable access to water;
- economic growth (water must support economic and social development); and
- ecological integrity (water resources must be protected so that they will continue to provide water in the future).

Water Resource Management key objectives:

The key objectives for WRM are described as follows (also refer 3.1.3.1):-

- review and revise the organisational structure to achieve consonance with the mandate arising from the NWA, including consideration of the establishment of a National Water Utility¹;
- implement the provisions of the NWA, *inter alia* :-
 - develop and establish the National Water Resource Strategy and Catchment Management Strategies;
 - establish, empower and capacitate water management institutions;
 - continue the development of, and implement, a pricing strategy for water use charges;
 - continue the development of, and implement water resource protection measures;
 - progress registration of water use;
 - develop a strategy for compulsory water use licensing;
 - develop and implement water conservation and demand management strategies; and
 - continue the development and establishment of, and maintain national water resource monitoring and information systems.
- implement a national programme for clearing invasive alien plants (Working for Water Programme);

¹ The National Water Policy for South Africa moots the creation of a National Water Utility – an incorporated public company – to undertake the management of the existing major water-related infrastructure (refer 3.1.1) which is considered to be of strategic national importance. Such an organisation, if it is implemented (no decision has been taken yet) could also be responsible for planning, financing, and developing additional nationally important infrastructure. Investigations into the feasibility of the Utility, particularly in respect of its benefits for society and its prospects for long-term financial viability, have commenced.

- develop and establish a national water resource management/water services co-ordination structure; and
- position the Department as a national water resource management, policy development, regulatory, monitoring and support institution.

2.2.1.2 WATER SERVICES

The last few years have also seen many developments and changes in South Africa's water services sector (defined as both water supply and sanitation). An enormous number of activities have been generated as a result of the ongoing transformation in this sector and, in particular, the imperative to provide **sustainable services** as efficiently as possible.

Revised national water services policy, legislation, strategies and programmes paved the way for the above by recognising the following. The right of access to basic services; the necessity to ensure sufficient water and an environment not harm-full to health or well-being; that services should be provided in an efficient, equitable and sustainable manner; and all spheres of Government must observe and adhere to the principles of co-operative government.

It is further noteworthy for the following issues:-

- re-definition of institutional roles and responsibilities;
- the commitment of Government and other stakeholders in assisting communities to obtain safe, adequate, sustainable water supply and sanitation services, thus redressing the historical imbalance that favoured some and neglected many others; and
- the changing and shifting of the main goal and role of DWAF's Water Services functional area from implementation to custodianship and regulation.

The prevention of environmental degradation and social and economic upliftment were thus key drivers of the changes to both water resource management and water services policy and legislation. It must further be noted that the new water policy and legislation is recognised as a significance contribution in the international practise of water and related law. It is internationally accepted as groundbreaking and progressive legislation.

Water services policy and legislation:

The major and overarching Water Services policies and legislation include, in dated order (refer to Figure 1):

- 1). The White Paper on Community Water Supply and Sanitation, November 1994.
- 2). Draft White Paper on Sanitation, 1996.
- 3). The Water Services Act, No. 108 of 1997.

Water services mandate:

The Department of Water Affairs and Forestry is mandated by the above legislation to create a developmental regulatory framework within which **water services** (water supply and sanitation) and access to water services can be provided.

In terms of the 1997 Water Services Act DWAF is mandated to ensure effective, sustainable, professional and equitable access to water services for all.

This mandate has a strong emphasis on the social environment within the context of a healthy physical environment as well as a sustainable economic focus, and aims to *inter alia*:-

- promote socio-economic development through the provision of Water Services (WS) to the previously unserved population of South Africa and constant realignment of the programme as necessary and appropriate to achieve sustainability, effectiveness, efficiency and affordability of services; and
- to provide interim support in respect of the right of access to basic water supply and the right to basic sanitation necessary to secure sufficient water and an environment not harmful to human health and well-being.

In addition, DWAF was given an interim additional mandate by Cabinet that entails implementation of schemes in the rural areas as well as operation and maintenance of approximately 400 large schemes inherited from the former homelands.

This role is foreseen and is already changing towards growth in the management of water services provision, integration of Government functions, and a move towards ensuring provision of *total* (rural and urban) effective sustainable services. The former is supported by sub-goals such as ensuring free access to basic services; job creation and poverty alleviation; economic development and spatial planning; and effective and appropriate use, protection and management of water resources.

Water service key objectives:

The key objectives for the WS functional area are:-

- providing strategic guidance to the WS sector;
- positioning the Department as a national water services policy development, regulatory, monitoring and support institution;
- providing direct project implementation support, operation and maintenance of inherited schemes (i.e. previous homelands schemes);
- promoting the transfer of water services schemes currently operated by the Department to appropriate water services institutions;
- providing capacity building and empowerment of institutions;
- supporting Local Authorities in developing capacity to undertake water services provision, including the preparation of water services development plans;
- developing and maintaining the monitoring, auditing and evaluation of water services;
- developing and establishing water services monitoring and information systems;
- developing implementation strategies and providing support to all which meet basic health and functional requirements, including the protection of the quality of water resources and the promotion of effective WRM and conservation;
- monitoring and guiding the activities and performance of water service authorities, institutions and water board as bulk services providers;
- the setting and maintenance of national norms and standards for tariffs in respect of WS;
- the establishment and dis-establishment of water boards and water services committees and their duties and powers where needed;
- planning and organizing the intervention by the Minister or by the relevant Province, where needed; and
- providing financial support to water services institutions and development.

2.2.2 FORESTRY

Along with the new approach to water management and provision, and in accordance with national and international environmental policy, a change in national perspective was required in respect of the forest sector. Issues to be address included: understanding the role of the sector; establishment of a process to investigate how forest management and development influences the environment and how to become sustainable; and to weld together the three strains of conservation forestry, commercial forestry and community forestry.

Historically forest management and the 1984 Forest Act tended to focus on industrial forestry and the management of forested land, with little emphasis on the relationships between people and the resources provided by forests.

With the review of forestry policy to accommodate the new directions of the Constitution and environmental legislation, new principles and responsibilities were thus introduced and incorporated, providing the basis for sustainable management of South Africa's forests.

Current forest policy and legislation directs DWAF to deliver a wide range of support and services to ensure sustainable development of the forest sector in its widest and most inclusive sense.

Thus, over and above the management of industrial/commercial forest resources and the protection of State forests, current forest policy also requires the following. Development of community forestry, sustainable management of natural forests as well as sustainable access and use of forests for environmental, economic, educational, recreational, cultural, (amongst others), purposes.

It further directs DWAF to facilitate co-ordination inter-Departmentally and between different spheres of Government, the private sector and civil society. The policy gives direction to the management and control of the use of forests and forestland in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, and vitality. It provides for the potential to fulfil current and future needs, relevant ecological, economic and social functions, at both local and global levels, and which will not cause damage

to other ecosystems. Thus **sustainability** is a key element and principle underpinning current forest policy and law.

As part of the broader sustainable forest management framework is the management of fire danger. The National Veld and Forest Fire Act is dedicated to ensure this and covers three main elements of fire prevention and management:-

- a fire-danger rating system, to be implemented with the assistance of the Weather Bureau;
- a participatory system of fire protection associations, mandatory requirements for fire prevention measures; and
- a national system of fire information and statistics.

The aims of sustainable forestry management thus are to:-

- promote the sustainable management and development of forests for the benefit of all;
- create the conditions necessary to restructure forestry in State forests;
- provide special measures for the protection of certain forests and trees;
- promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes;
- promote community forestry;
- promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination; and
- to prevent and combat veld, forest and mountain fires throughout the Republic.

Sustainable forest management and measuring progress towards the goal of sustainability, are being approached through the application of principles (incorporated in policy and legislation), criteria and indicators (refer Appendix 1). A first draft of principles and criteria for sustainable forest management for the country's forest sector has been completed. The task for determining and developing these were undertaken by the Committee for Sustainable Forest Management (refer 4.1.4). This committee will also develop indicators and standards (refer Annexure 1).

A preliminary assessment of sustainable forest management as well as the capacity of institutions to achieve sustainable forest management of South Africa's forestry resources is outlined in the National Forest Action Plan (refer 3.3.3).

Forestry policy and legislation:

The major and overarching forestry policies and legislation include, in dated order (refer to Figure 1):

- 1). The White Paper on Sustainable Forest Development in South Africa, 1996.
- 2). The National Forest Act, No. 84 of 1998 (NFA).
- 3). The National Veld and Forest Fire Act, No. 101 of 1998 (NVFFA).

Forestry's mandate:

The Department of Water Affairs and Forestry is thus mandated by -

- The **NFA** to ensure that South Africa's **forest resources** (indigenous and commercial) are protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all. Once Provincial Government has developed sufficient expertise, resources and administrative capacity, the Minister may reassign the responsibility of managing indigenous forests.
- The **NVFFA** to prevent and combat **veld, forest and mountain fires** throughout the country and thereby limit and reduce the damage and losses caused by fires to life, fixed property, infrastructure, moveable property, stock, crops, flora and fauna and veld in South Africa.

Forestry key objectives:

The key objectives for the forestry functional area thus are to:-

- lease the State's commercial forests to private operators in such a manner that it promotes investment, employment, competition and black empowerment;
- establish a Forest Land Management Unit to manage the leases of commercial plantations transferred to private operators;
- develop appropriate management systems for community plantations and devolve these to community control wherever possible;

- establish a national database of all indigenous forests, together with appropriate, participatory management plans;
- actively provide community forestry services, including urban greening and rural livelihood strategies and control thereof;
- manage indigenous forests effectively and oversee provincial management of indigenous forests;
- develop strategies to implement the provisions of the NFA and the NVFFA;
- develop and monitor forestry policy and provide quality information about South Africa's forests; and
- position the Department as a national forestry institution for the sustainable management of South Africa's forests through policy development, regulatory, monitoring and support functions, as well as direct management.

CHAPTER 3: PRIORITY ENVIRONMENTAL FUNCTIONS, STRATEGIES AND RESOURCES FOR IMPLEMENTATION

This Chapter focuses on those priority or significant environmental functions that can be used to manage the environment or have an impact on the environment.

It is, however, important to note that DWAF's priority functions have not been ranked or weighted in any manner. The priority functions are merely presented as an integrated group for each of the functional areas of environmental significance. These are all of equal and key importance in realising DWAF's integrated legislated mandates.

The approach for describing DWAF's impacting activities (Environmental Implementation Plan - EIP functions) was based on those functions that directly contribute to significant impact / effect on the environment.

Thus, DWAF's priority environmental impacting functions are broadly described as those functions or interventions required by the Department in order to make water available for use on a bulk scale. This is through water resource infrastructure planning, development and operation as well as the implementation of water services programmes and projects.

DWAF further has implementation responsibilities related to commercial and community forestry that contribute to impacts on the environment, even though these functions are changing toward a regulatory and intervention nature.

The rationale behind the categorisation of DWAF's management functions (Environmental Management Plan - EMP functions) was based on those functions that are used to manage the environment (in this case water and forestry resources) as well as the impacts of external parties on these resources.

DWAF's priority water resources management functions are those related to the protection of water resources, regulation of water use and the development of an appropriate policy and strategy framework for water resource management.

The water services functions entail creating an enabling environment (i.e. the development of policy and strategy), planning water service provision, monitoring and auditing of activities undertaken by water service institutions, regulation and where needed, intervention.

Forestry functions involve ensuring sustainable management of natural forests as well as fire prevention and management.

In addition to describing the priority environmental functions, this Chapter will further address the strategies and resources required to realise these functions. Table 1 gives a summary of DWAF's priority environmental functions for each of DWAF's three core functional areas.

3.1 WATER RESOURCE MANAGEMENT: PRIORITY ENVIRONMENTAL FUNCTIONS AND STRATEGIES

3.1.1 WATER RESOURCE MANAGEMENT IMPACTING FUNCTIONS

The following DWAF water resource management function significantly impacts the environment, described with the corresponding mitigation or control measures in respect of the impacts caused.

3.1.1.1 WATER RESOURCE INFRASTRUCTURE PLANNING, DEVELOPMENT AND OPERATION

This function entails the implementing actions related to the management and development of water resources and involves the planning, design, implementation and operation of water resources infrastructure and intervention programmes, to ensure sufficient water availability of adequate quality.

Table 1: Summary of DWAF's priority environmental functions

PRIORITY FUNCTIONS IMPACTING THE ENVIRONMENT		
WATER RESOURCE MANAGEMENT (refer 3.1.1)	WATER SERVICES (refer 3.2.1)	FORESTRY (refer 3.3.1)
<ul style="list-style-type: none"> • Water resource infrastructure planning, development and operation. 	<ul style="list-style-type: none"> • Project development and implementation. • Operation and maintenance of schemes. 	<ul style="list-style-type: none"> • Facilitating and supporting community forestry. • Development of the industrial/commercial forestry sector.
PRIORITY FUNCTIONS MANAGING THE ENVIRONMENT		
WATER RESOURCE MANAGEMENT (refer 3.1.2)	WATER SERVICES (refer 3.2.2)	FORESTRY (refer 3.3.2)
<ul style="list-style-type: none"> • Policy and strategy development. • Water resource protection. • Regulating water use. 	<ul style="list-style-type: none"> • Water services planning. • Developing and maintaining policy and strategies - creating an enabling environment. • Regulation and intervention. • Monitoring and auditing. 	<ul style="list-style-type: none"> • Sustainable management of natural forests. • Fire management.

South Africa's climate, and therefore the availability of natural water supplies, varies widely. Given this variability, and the inevitable water needs, it is usually necessary to dam rivers to obtain reliability of supply, or to import water from a neighbouring catchment to supplement the water resources. The infrastructure of large dams, canals, tunnels, pump-stations and pipelines required to ensure reliable availability of such bulk un-purified water supplies can thus be referred to as *WRM infrastructure*. The purification works, pump-stations, reservoirs, pipelines and reticulation networks required to bring purified water from these bulk raw water sources to the individual domestic and industrial end-users, are usually referred to as *water services infrastructure*.

Such infrastructure ensures that a key prerequisite for an effectively functioning industrialised society is met, namely that availability of a crucial natural resource such as water is not interrupted or uncertain.

The implementation and operation of WRM infrastructure does result in some environmental impact even though the broader objective is of benefit to society at large.

However, these impacts in respect of WRM infrastructure and the mitigation of the effects on the environment are addressed via environmental impact assessments (and processes) and subsequent development of environmental management plans in co-operation with the National DEAT and its provincial counterparts.

Further opportunities for co-operation in respect of the foregoing are addressed in Chapter 4 under 4.2.2.1.

Furthermore, the NWA requires that infrastructure development/abstraction must be integrated with demand management and water conservation as part of an integrated water resources planning approach (refer 3.1.2.2), which implies a more sustainable approach to water resource development.

3.1.2 WATER RESOURCE MANAGEMENT FUNCTIONS

The NWA states that National Government is the public trustee of the country's water resources. Water resources are a national asset to be utilised in the best interests of all citizens in a sustainable manner to guarantee the needs of future generations.

The needs of the environment are also guaranteed in the Act, flowing from the Constitutional right of all to a safe, healthy environment. This means that Government is tasked to ensure that water resources as well as water users are protected.

Water resources are protected through Chapter 3 of the NWA and water use is controlled and regulated through Chapter 4 of the Act, which outlines permissible water use and all matters pertaining to authorisation of water use.

The above does, however, require a broader integrating framework of policy and strategy. Availability of water for use (over and above the environmental and basic needs requirement) needs to be determined through reconciling availability of water resources and the requirements (demands) for water. Available water further needs to be allocated in a fair and equitable manner – this is achieved through the development of water use allocation plans.

The foregoing will be addressed via the National Water Resource Strategy and catchment management strategies (refer 3.1.2.1).

3.1.2.1 POLICY AND STRATEGY DEVELOPMENT

This function entails developing coherent policies, strategies and regulatory frameworks for other functions to implement, and include:-

- long-term strategic planning and visioning for the WRM function (refer 3.1.3.1);
- developing legislation and regulations, ensuring coherence and integration;
- developing the National Water Resource Strategy (refer 3.1.3.2), e.g. undertaking water situation assessments; developing and applying a National Water Balance Model; and development of national scenarios for reconciliation of water requirements with available resources;
- at a regional or water management area (WMA) level, developing Catchment Management Strategies (refer 3.1.3.3) which include water use allocation plans;
- developing methodologies and guidelines for WRM;
- financial planning and business planning for the WRM function;
- formulating the organisational roles and responsibilities of water institutions (refer 4.2.2.1); and
- formulation of the national pricing strategy for water use (refer 3.1.2.3).

3.1.2.2 WATER RESOURCE PROTECTION (CHAPTER 3 OF THE NWA)

The water resource protection function is fundamental to the new approach to water resource management as well as compliance with sustainability principles (see Chapter 5), and includes the following:

- **Implementing Resource Directed Measures (RDMs).**
These measures focus on the water resource as an ecosystem rather than on just water itself as a commodity and are tools to determine the sustainable levels of water use.

The following resource-directed measures are specified by the NWA:

- **A national classification system** for water resources:
According to the Act, the first stage in the protection process is to develop a system to classify the nation's water resources. This classification system will establish guidelines and procedures for determining different classes of water resources (representing a certain level of protection and hence the level of acceptable risk). Associated with each class, procedures to determine the Reserve and to set objectives (see below) which will satisfy users' water quality requirements as far as possible are given. It will further specify the water use activities that should be regulated or controlled. Thus, the classification system must provide a nationally consistent basis for assessing impacts on water resources, and for determining whether they are acceptable or not.

Furthermore, it is proposed that aside from assessing the *current* class, water management activities should also aim to improve a resource to a *desired* class, by slowly improving the health of the ecosystem over time. Here, it is proposed that stakeholders in a co-operative manner set a joint vision for that resource.

- **Determining the Reserve:**
The NWA specifies only one right to water in law, that of the Reserve. The Reserve consists of two parts: *the basic human needs reserve*, which includes water for drinking, food preparation and

personal hygiene and *the ecological reserve*, which must be determined for all or part of any significant water resource.

The Reserve must specify the amount (quantity) of water that must be present in the water resource, as well as the quality of the water for the water resource to remain ecologically healthy and to be able to provide the basic human needs for water. All water uses under the NWA are subject to the requirements of the Reserve. Thus, licences (refer 3.1.2.3) cannot be issued for water use without the Reserve having been determined.

- **Setting Resource Quality² Objectives (RQOs):**

This represents the desired level of protection of a water resource. The Act determines that RQOs for each water resource must be set based on the class of the resource and the Reserve.

▪ **Implementing Source Based Controls (SBCs).**

SBCs are used to control the sources of impacts in such a way that any impact on a water resource does not exceed the requirements set by the RDMs. They include a wide range of measures such as:-

- standards to regulate the quality of waste discharges to water resources;
- requirements for on-site management practices (e.g. to minimise waste at source and to control diffuse pollution);
- requirements to minimise impacts of water use generally, not just water quality aspects; and
- requirements for clean-up and rehabilitation of water resources that have already been polluted,

which are implemented through *inter alia* incorporation in licence conditions.

Other protection measures include economic incentives to foster the development of low-waste and non-waste technologies and to reduce pollution as well as both mandatory and voluntary **water conservation and demand management**.

Water Conservation (WC) includes the minimisation of loss or waste, the preservation, care and protection of water resources and the efficient and effective use of water. **Demand Management (DM)** refers to the implementation of a strategy (policies and initiatives) by a water institution to influence the water demand and usage of water in order to meet any of the following objectives or principles: Economic efficiency; social development; social equity; environmental protection; sustainability of water supply and services; and political acceptability.

The implementation of WC/DM principles is essential in meeting the national water policy goals of basic water supply for all South Africans and the sustainable use of water resources.

There are, however, various obstacles and constraints to overcome before the full potential of WC/DM principles can be achieved. Some of the constraints are related to institutional arrangements such as lack of integration and co-operation between the various institutions in the water supply chain, particularly in the water services sector. Other constraints include the lack of ring fencing of the water services functions, and the lack of integration and co-operation within the different departments of Local Authorities.

It is thus necessary to investigate, define and acknowledge these constraints in order to develop activities within WC/DM strategies to address them. In particular it is important to integrate into organisations' water resource planning issues and the introduction of social, environmental and economic issues as important considerations in planning processes of the various institutions, Departments and spheres of Government in the water supply chain. This will facilitate the maximisation of benefits to society and minimise the impact on the environment.

A paradigm shift to incorporate the principles of WC/DM is thus required in the water supply industry. This can only be achieved through co-operation and detailing of comprehensive strategies. WC/DM strategies will form part of the National Water Resource Strategy as prescribed in the NWA and will identify national objectives and goals that will lead to the development of action plans and key measures to be implemented by the various water institutions.

² Resource quality according to the Act means the quality of all the aspects of a water resource including: the quantity, pattern, timing, water level and assurance of instream flow; the water quality, including the physical, chemical and biological characteristics of the water; the character and condition of the instream and riparian habitat; and the characteristics, condition and distribution of the aquatic biota.

Draft WC/DM strategies have been developed for the following sectors: South African Forestry; Industry, Mining and Power; Water Services; and Agricultural.

DWAF's role in the above is to:-

- promote institutionalisation of WC/DM;
- develop policies, strategies and regulations;
- integrate WC/DM in DWAF's other relevant functions;
- undertake capacity building, awareness creation and communication activities; and
- monitor and evaluate compliance and performance.

3.1.2.3 REGULATING WATER USE (CHAPTER 4 OF THE NWA)

This function comprises giving effect to the policies, strategies, frameworks, plans and regulations for managing the use of water resources and includes:

- **Authorising** (based on DWAF standards or conditions) **and registering water use.**

The NWA section 21 lists eleven broad categories of water use, including water abstraction and storage, waste discharges and disposal, and instream activities. The Department's responsibility for WRM includes a responsibility to protect water users and secure the long-term sustainable utilisation of water resources. This requires that water resources are safeguarded from over-use and from impacts which will cause degradation. DWAF thus needs to balance long-term protection of water resources and water users on the one hand, and the country's needs for economic growth and social development on the other hand.

Authorisation of water use (through general authorisations, licences etc.) is a mechanism that will enable the Department to give effect to the principles of sustainable utilisation of water resources. Authorised water users will be able to use water, and in so doing have a responsibility to carry out the water use in accordance with the terms and conditions of the authorisation. It is in the design and application of the terms and conditions of water use authorisations that the environment will be protected, and other water users will be considered.

Registration of water use is conducted prior to authorising water use, and establishes where and how much water is being used in the country, as well as the nature and extent of water use. Once a national register is established, DWAF will for the first time be able to make informed decisions on efficient and optimal water use and the protection and conservation of water resources in South Africa. Registration is one of the highest priority actions currently undertaken by the Department as part of the implementation of the South Africa's water policy³.

- **Waste management**, i.e. permitting of waste disposal sites.

The permitting of waste disposal sites is a requirement in terms of the Environment Conservation Act, No. 73 of 1989 (ECA), section 20. DEAT is responsible for the implementation the ECA and in particular waste management, which is delegated to the provincial level.

However, the DEAT does not have the capacity nor the relevant skills to deal with the permitting of waste disposal sites. Since DWAF has been acting as an agent to DEAT in this regard for some time, DEAT and DWAF came to an agreement in a co-operative manner that, as from the 4th of February 2000 DWAF will continue to act as such on behalf of DEAT. This date corresponds with the Constitutional requirement for transferring of responsibility for waste management and permitting to Provincial Government.

In terms of section 20(1) of the ECA, no person may establish, provide or operate a disposal site without a permit issued by the Minister of Water Affairs and Forestry. DWAF is the appropriate choice since the most severe and long-term impact resulting from the disposal of waste on land is the on the water environment.

DWAF's role thus includes:-

- setting and reviewing policy and standards for waste management;

³ Refer Regulation R.1352, regulations requiring that a water use be registered, dated 12 November 1999 and promulgated in Government Gazette No. 20606.

dissemination activities are co-ordinated, and information on water resource characteristics defined by the NWA is available, etc.); and

- the management class, Reserve and RQOs are available for all water resources.

- A programme was developed using the multi-level objective framework as a basis. Activities were identified and time frames for their execution were determined in consultation with the responsible line function managers.

The resources required were estimated (refer 3.4). Only the financial resources were taken into account for this exercise. The total estimated incremental cost for implementing the NWA, in addition to current MTEF and Medium Term Expenditure Estimate (MTEE) allocations, is R1.19 billion over the next 10 years.

- A monitoring and control system to continuously monitor the NWA Implementation Programme.

The implementation of the NWA will be co-ordinated with the DWAF restructuring process (refer Chapter 1) as well as the development of the NWRS (see below).

3.1.3.2 NATIONAL WATER RESOURCE STRATEGY

The NWA sets the framework for the development of national and regional management strategies in the form of a **National Water Resource Strategy (NWRS)** and **Catchment Management Strategies (CMSs)**, respectively. The goals of the national and catchment strategies are a logical extension of the goals of the NWA, as they are intended to give effect to the main purpose of the Act.

It will be the responsibility of the Department to draft the NWRS and that of Catchment Management Agencies (CMAs) or DWAF (Regions) to develop CMSs for the management of water resources within Water Management Areas (WMAs), (refer to Government Gazette, No. 20491, of 1 October 1999).

The NWA specifies those areas of water management that must be done at a national level, and those that must be done at a regional or catchment level. And it outlines the institutions that are necessary to achieve the purpose of the Act. However, the Act does not state exactly how to implement all of its different components, neither does it spell out all the methods and procedures that are necessary. Rather, it specifies that these components must be developed in a progressive manner over time, with stakeholder consultation. For this reason, the Act makes provision for a NWRS.

The NWRS must, subject to section 5(4)(a) of the NWA:-

- (a) set out the strategies, objectives, plans, guidelines and procedures of the Minister and institutional arrangements relating to the protection, use, development, conservation, management and control of water resources within the framework of existing relevant Government policy in order to achieve the purpose of the NWA; and any compulsory national standards prescribed under section 9(1) of the Water Services Act;
- (b) provide for at least -
 - (i) the requirements of the Reserve and identify, where appropriate, water resources from which particular requirements must be met;
 - (ii) international rights and obligations;
 - (iii) actions to be taken to meet projected future water needs; and
 - (iv) water use of strategic importance;
- (c) establish WMAs and determine their boundaries;
- (d) contain estimates of present and future water requirements;
- (e) state the total quantity of water available within each water management area;
- (f) state water management area surpluses or deficits;
- (g) provide for inter-catchment water transfers between surplus water management areas and deficit water management areas;
- (h) set out principles relating to water conservation and water demand management;
- (i) state the objectives in respect of water quality to be achieved through the classification system for water resources provided for in this Act;
- (j) contain objectives for the establishment of institutions to undertake water resource management;
- (k) determine the inter-relationship between institutions involved in water resource management; and
- (l) promote the management of catchments within a water management area in a holistic and integrated manner.

The statutory content of the NWRS thus indicates the integrated nature of the strategy and its incorporation of sustainability principles, which are currently being formally articulated and documented by DWAF.

Hence, in order to meet the requirements of the NWA, a NWRS is currently being developed by DWAF to enable a more structured and informed basis for planning and implementation for catchment management and integrated WRM. The first full version of the Strategy is expected to be in place by the end of 2001 and will be reviewed every five years.

3.1.3.3 CATCHMENT MANAGEMENT STRATEGIES

The NWRS is an overarching national strategy. The CMS, however, is fundamental to integrated management at a WMA scale, must give effect to the purpose of the NWA, and is binding on actions taken under the NWA. Therefore, it reflects strategic environmental planning for water resources, and provides the context for integrated environmental management around water issues at a regional level.

The main purpose of CMSs is to achieve sustainable use of water in each catchment. To do this, CMSs must balance the eleven recognised uses of water in the catchment while protecting the catchment's water resources.

The development and implementation of the CMS is the responsibility of the CMA (refer 4.2.2.1), which represents stakeholders and Government (particularly Local Government). CMS's will provide the appropriate framework around which CMA's can build the institutions, human and financial resources to progressively manage the water resources in WMAs, as well as encourage the numerous local initiatives that address water related issues.

The participatory nature of the CMS development is thus consistent with the principle of participatory management and local decision making over resources. The CMS must also explicitly take account of other plans, such as water services development plans (refer Figure 3) etc., further emphasising co-operation in respect of environmental management.

The preceding paragraphs highlight the importance of co-operative governance, particularly in terms of balancing the equity, sustainability and development imperatives of the NWA.

CMSs have not been developed yet, and CMAs are still being established, providing a great opportunity to develop a precedent for co-operative governance. Guidelines to assist with the development of CMSs are, however, currently being finalised by DWAF. Besides providing a generic framework for CMSs, these guidelines will also explain the fundamental elements of a CMS and indicate the institutional linkages associated with its development and implementation. Although CMSs have not existed up to now and existing catchment strategies and plans do not necessarily fully conform to the requirements of the NWA, they will be used as interim strategies until they are further refined and updated to meet the new requirements. The upgrading and refinement process would be undertaken in a phased manner, addressing problem areas on a priority basis, and a common methodology and approach will be followed.

Furthermore, the process will be co-ordinated with the development and planning initiatives (i.e. water services development plans, Integrated Development Plans, Land Development Objectives, Spatial Development Initiatives and implementation and management plans) being undertaken by other Government Departments.

Finally, given the inherent difficulties of implementing the NWA, the time frames of five years for the NWRS and CMSs and will provide the opportunity to improve on and revise initial approaches where necessary.

3.2 WATER SERVICES: PRIORITY ENVIRONMENTAL FUNCTIONS AND STRATEGIES

While the responsibility for ensuring provision of services to communities in an **equitable** and **sustainable** manner falls on Local Government (section 152 [1] of the Constitution), section 155 gives National Government (DWAF) the legislative and executive authority to see to the effective performance by Local Government and institutions of their functions.

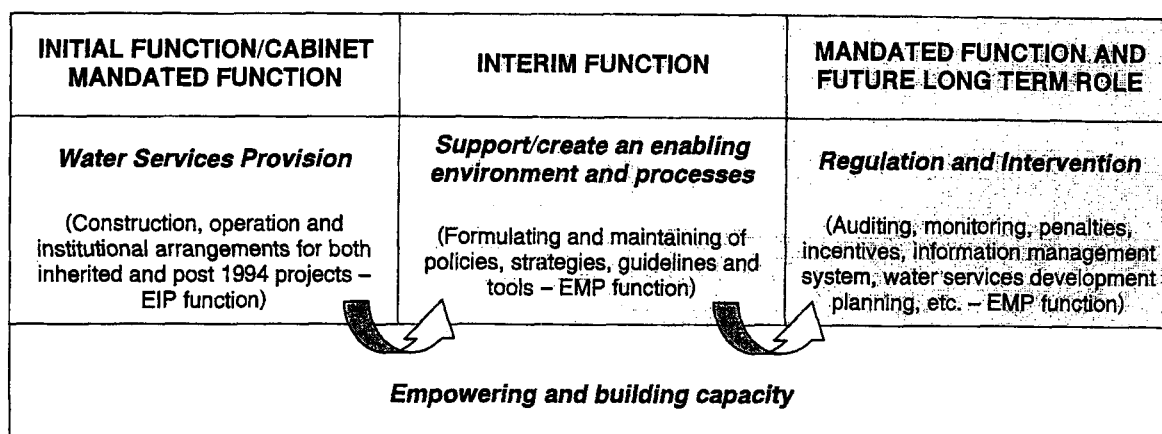


Figure 2: The progressive changing of DWAF's functions and role from that of implementation and operation to monitoring and regulating.

In this context, the Department currently performs the following functions in terms of water services delivery. DWAF is the custodian and regulator (EMP function) of water service delivery, in terms of an interim Cabinet mandate. DWAF also implements projects (EIP function) in the rural areas due to the lack of capacity and backlog of service provision by Local Government, as well as operating and maintaining inherited schemes from the former homelands.

However, the future, long term role of the Department will be to monitor and regulate for both rural and urban areas, basic and high level water services. Figure 2 gives an indication of the existing impact and management role of the Department as well as the progressive changing and shifting of DWAF's responsibilities.

3.2.1 WATER SERVICES IMPACTING FUNCTIONS

3.2.1.1 PROJECT DEVELOPMENT AND IMPLEMENTATION

This function encompasses amongst other the following components:-

- sustainable implementation of the water and sanitation capital programme via development and implementation of water services business schemes. The former integrates infrastructure, water resources, consumers, business and environmental principles and functions; and
- co-ordination with other infrastructure programmes.

Impact control of the implementation of the above projects is achieved through processes of decision making and selection of projects that are supported by feasibility studies and environmental impact assessments. Environmental Impact studies are conducted for all sanitation projects and are the responsibility of District Councils' management.

Achievements in respect of the above are as follows. Since 1994, the Department has delivered basic water supply infrastructure to nearly seven million people, with the majority at the Reconstruction and Development Programme established required standard. In addition the programme on Community Water Supply and Sanitation has also created 360 000 temporary jobs.

3.2.1.2 OPERATION AND MAINTENANCE OF SCHEMES

This function entails amongst others the following:-

- operating and maintaining water and sanitation schemes from the former homelands; and

- transferring of works to Water Services Authorities⁴ (WSAs) and providing technical, commercial, institutional and regulatory support to these institutions to ensure that the operation and maintenance of water services and systems give rise to sustainable water provision (also refer 4.2.3.1).

It should be noted that the vast majority of water services schemes are supplying water to communities. Recent reports indicate that 82 % are fully functional, a further 11% are working reasonable well and only 7% have serious problems, which are being addressed.

3.2.2 WATER SERVICES MANAGEMENT FUNCTIONS

The following DWAF functions manage the environment and mitigate significant impacts on the environment. These functions support the DWAF's custodianship role mandated by the Constitution and the Water Services Act.

3.2.2.1 WATER SERVICES PLANNING

The Department is responsible for overseeing the national planning for water services – this function includes *inter alia*:-

- overseeing and effective planning for sustainable water services provision on a national, provincial, regional (e.g. alignment of catchment management, economic and spatial strategies), and Local Government level including; planning, appropriate project and scheme levels;
- developing and maintaining a framework for effective project and scheme selection;
- assisting the WSAs to develop a planning culture and assisting them in the preparation of their Water Services Development Plans (WSDPs)⁵ (refer 3.2.3.2); and
- developing an appropriate sanitation programme in co-ordination with amongst other the National Sanitation Co-ordinating Office.

3.2.2.2 DEVELOPING AND MAINTAINING POLICY AND STRATEGY

This entails the development of coherent policies, strategies and frameworks. This will create an enabling environment for the water services sector and include developing the tools required to support and regulate the water services sector, e.g.:-

- norms and standards for tariffs;
- compulsory national standards for water services;
- model contracts and bylaws; and
- development of policies, guidelines, regulations etc. (e.g. supporting the integrated planning processes of Provincial and Local Government by developing guidelines to compile their WSDPs as required by the Water Services Act).

3.2.2.3 REGULATION AND INTERVENTION

The Water Services Act was conceived as legislation aiming to provide a supportive regulatory structure for the provision of water services by clearly defining the roles and responsibilities of the different sector institutions. Even though the Department currently performs a dual function (being both manager and implementor), the future role of the Department in terms of water services will change to that of monitoring and regulation (refer Figure 2).

As Local Government takes up operational responsibility for services provision, DWAF's regulating functions (will) include, to:-

- ensure that there is progress in providing efficient, affordable, economic and sustainable access to water services to all consumers or potential consumers;
- guide the equitable allocation of resources;

⁴ A Policy For The Transfer Of Government Water Services Works, as well as a Policy On Transfer Of Personnel From The Department Of Water Affairs And Forestry To Other Institutions/Organisations has been developed and approved by the Departmental Bargaining Council.

⁵ To ensure integrated planning for water services, the Water Services Act requires all water services authorities to prepare a WSDP.

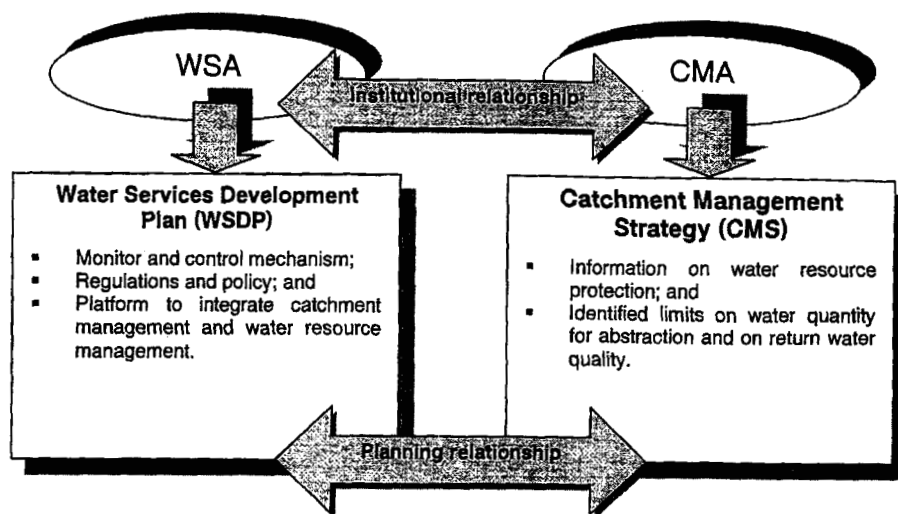


Figure 3: Relationship between WSDPs and CMSs

- create an environment in which the required financial resources to achieve Government's objectives can be secured;
- achieve regional efficiencies of scale;
- protect consumers against economic exploitation and/or inefficiency; and
- give providers a secure and predictable environment, as well as facilitating choices between providers.

3.2.2.4 MONITORING AND AUDITING

The Department is responsible for developing and maintaining systems that will provide information to the WSA, Water Service Provider (WSP) and other water services institutions. This will ensure the development and maintenance of sustainable schemes, empowerment of people in making informed decisions, enhancing a planning culture, and thus ensuring sustainable environmental management. Examples of such systems and data bases are:-

- the National Information System (an umbrella system), required by both the NWA and the Water Services Act, enables understanding, alignment, integration and sustainable development in addition to monitoring of the performance and compliance of the water services sector, as well as national water resources.
- the Monitoring and Evaluation system. In line with the requirements of the Water Supply and Sanitation White Paper (Nov 1994), it was essential to develop an effective Monitoring and Evaluation system (M&E) which ensures that all projects meet the required standards and that the goals of the White Paper are met. This activity also includes performance auditing of institutions and other role players who are involved in the implementation of the RDP programmes. An important additional goal of setting up an M&E programme is to provide ongoing feedback to enable role players to modify their approaches and improve future performance; and
- a monitoring system for WSDPs (this system has been developed and is operational along with a database on Local Governments and their WSDPs).

3.2.3 WATER SERVICES STRATEGIES

3.2.3.1 STRATEGIC FRAMEWORK FOR WATER SERVICES SUPPORT

The objective of the Strategic Framework is to provide a framework within which the water services support function of the Department would be carried out, promoting co-operative governance and effective delivery of services.

It was compiled in consultation with the Department of Provincial and Local Government (DP&LG) (previously Department of Constitutional Development), the Provincial Departments, Local Government, and WSAs.

3.2.3.2 WATER SERVICE DEVELOPMENT PLANS

The Water Services Act requires that every WSA (Local Government) prepare five-yearly Water Services Development Plans (WSDPs) for its area of jurisdiction.

These WSDPs are:-

- an effective business plan for Local Government;
- a pro-active knowledge base that includes the promotion of integrated environmental management;
- a strategy document;
an action and commitment undertaking or performance contract dealing with sustainability at Local Government level and is a measure to ensure that functions will be executed;
- a monitoring and auditing tool to evaluate performance and compliance to DWAF's standards and regulations which also evaluates strategies and capacity, as well as serving as a research mechanism;
- a communication system;
- an integrator through which the alignment of Provincial socio-economic strategies, the Local Government Planning Framework, Integrated Development Plans, water resource strategies and other spatial strategies can be promoted;
- a capacity building and empowerment tool; a platform to align water resource sectors; and
- a decision making tool.

The Water Services Act requires that environmental management issues be included in WSDPs. The environmental (social, ecological and economic) requirements addressed in WSDPs are *inter alia*: appropriate service levels; effective water use (it includes water resource protection and water conservation objectives); correct resource choices; water quality/health; social upliftment; basic services and free water; and economics and prosperity.

DWAF's role in respect of WSDPs is:-

- providing guidance;
- providing an enabling framework;
- building capacity and empowering Local Government;
- development and maintenance of standards and norms;
- monitoring and auditing performance and compliance; and
- developing and maintaining a decision support system.

Relationship of WSDPs with the NWA and other strategic plans such as the CMS:

When a WSA prepares its WSDP it needs to be sensitive to and aware of other water related planning initiatives such as the strategies of CMAs and the business plans of water boards and other WSPs (refer 4.2.3.1).

The NWA deals with WRM, the establishment of CMAs and the preparation of CMSs. A CMS is a strategic plan to manage the catchment (refer to 3.1.3.3) just as a WSDP is a strategic plan for providing consumers with water services. The importance of this lies in the fact that it sets up a planning relationship between these two plans and an institutional relationship between CMAs and WSAs (refer to Figure 3).

From the point of view of a WSA, the NWA would deal with the limitations on the amount of water which can be abstracted from the resource, and how this should be returned to the resource. It further deals with water quality in the resource, and thus places limitations on the way the WSA manages water services from an environmental point of view. The WSDP format has been developed to allow for integration with CMSs.

Finally it is important to note that the NWA requires that licenses be obtained to use water. This applies to both the WSA and major water using industries within the boundary of the WSA. This will be addressed in the WSDP (refer Figure 3).

3.3 FORESTRY: PRIORITY ENVIRONMENTAL FUNCTIONS AND STRATEGIES

Forests form an important part of South Africa's natural resource base, and contribute significantly to our economy. The Department plays a key role in developing, managing and regulating the country's forest resources. The forestry functional area manages commercial and indigenous forests, offers community

forestry services, and provides the policy and regulatory framework for the sector as a whole. The overarching implications and contributions of these functions (addressed in 3.3.1 and 3.3.2) are as follows:-

- sustainable management and promotion of ecological diversity of indigenous forests in South Africa for present and future generations through co-operative governance;
- economic upliftment of poor, rural communities, through implementation of Participatory Forestry Management principles in the management of State forests; and
- management of State forests in a co-operative manner with neighbouring communities and other service providers to ensure continuous and sustainable flow of benefits from and promotion of biological diversity in State forests to the benefit of the local, national and international community.

3.3.1 FORESTRY IMPACTING FUNCTIONS

The following DWAF forestry functions significantly impact the environment. However, even though these functions mainly have an impacting focus, they also encompass mitigation measures related to these impacts.

It should, however, be noted that as for Water Services, the Forestry component also has certain functions both having a management and impacting dimension. This is evident for DWAF's responsibilities related to industrial and community forestry. Thus, because of their impacting focus, these functions were categorised as priority functions impacting the environment even though the focus is gradually moving towards regulatory and management of other's impact on the environment and will be addressed accordingly in further EIMPs.

3.3.1.1 FACILITATING AND SUPPORTING COMMUNITY FORESTRY

Community forestry is defined in the White Paper on Sustainable Forest Development in South Africa as *"forestry designed and applied to meet local social, household and environmental needs and to favour local economic development"*. DWAF provides a community forestry service to facilitate this type of development in order to:-

- contribute to social and economic upliftment of all peoples of South Africa by promoting the responsible and sustainable utilisation of SA's natural resources and encouraging tree centred development in the country; and
- address the national problem of social deprivation, impoverishment, deforestation and land degradation in all sectors of rural and urban communities through community forestry development.

The foregoing is supported by the following functions, relating to support services on non-State land (a separate Conservation Forestry function is responsible for providing services on State land – refer 3.3.2). A process of provincial strategic planning has been implemented within Community Forestry, to ensure that each Province provides appropriate and effective services in each applicable function.

- *Managing DWAF's owned woodlots:*
Woodlots are small plantations usually established to provide fuelwood and building material to communities. The aim is to improve productivity to better meet local needs. This function is temporary as the long term aim is to devolve the ownership and management of woodlots to communities.
- *Managing the process of devolving the ownership, control and management of woodlots to communities:*
The aim is to empower communities to make decisions about managing their resources, facilitate access to productive forest resources and explore opportunities for local economic development.
- *Supporting the development of new afforestation, both commercial and for community needs:*
This is being done in accordance with the NWA. The aim is to stimulate responsible afforestation for economic development. Community Forestry is supporting existing small growers, with plantation management plans, business management and marketing. Community Forestry is also supporting the development of forest and tree related enterprise for income generation. This involves facilitating links between the private sector and communities, and includes supporting communities with woodlot related businesses.

- *Promoting the sustainable use of natural forest and woodland resources by working in partnership with Local Government and other service providers:*
The aim is to support sustainable livelihood development with communities using natural forest and woodland resources. A national Woodland Management Framework Strategy has already been prepared.
- *Assisting Local Government in the development of the urban forestry aspects of urban greening:*
This includes supporting the development of urban greening strategies with municipalities, and the provision of trees and seedlings to urban communities through Local Government. The aim is to support the development of sustainable livelihoods in urban areas and to improve the urban environment. A national Urban Greening Strategy has already been prepared.
- *Supporting Local Government and other service providers in working with communities to develop sustainable rural livelihoods:*
This includes supporting the provision of trees and seedlings to rural communities for agroforestry, reclamation, soil erosion control, rural enterprise, community woodlots, and other projects.
- *Providing information and promoting the implementation of appropriate legislation:*
Among the most important is the NVFFA. In promoting this Act, Community Forestry supports the development of fire protection associations, fire statistic collection, a fire danger rating system, and implements public awareness campaigns. The aim is to reduce the damage caused through forest, woodland and veld fires, and to reduce the impact of fire on the lives of rural and urban communities.

In providing services related to other core functions, Community Forestry also supports the implementation of other legislation. In particular, this applies to the NWA and the NFA.

The NWA requires that all new afforestation (as a stream flow reduction activity – refer 4.2.2.4) be subject to a licence in order to conserve water resources. Community Forestry supports various aspects of the system, mainly providing technical support to applicants.

The NFA requires that our national heritage of natural forests is sustainably managed. Community Forestry supports the implementation of this Act by providing advice and support to Local Government and other service providers, particularly in the area of community based natural resource management in woodland areas.

3.3.1.2 DEVELOPMENT OF THE INDUSTRIAL/COMMERCIAL FOREST SECTOR

In overview, this function entails ensuring the sustainable, profitable and scientific management of State forest timber plantation areas and participation in general business matters pertaining thereto.

The Department currently manages approximately 160 000ha of commercial timber plantations. However, the Government is moving away from the direct ownership and management of plantation resources. This is a process that will release significant assets on to the market. It is a complex task involving the merger of Government's two forestry arms (part of DWAF commercial forest component and the South African Forestry Company Limited (SAFCOL⁶) which is managed by the Department of Public Enterprises). These assets will be made available on long-term leases to private investors. The process involves a major human resources element as staffing structures are brought in line with industry norms.

Once the assets have been transferred, DWAF will be responsible for overseeing these areas in terms of the leases. The Department established a Forestry Land Management Unit to undertake these lease-of-property management responsibilities.

Further commercial forestry functions include:-

- promoting the sustainable development of the wider industrial forest sector;
- achieving an agreed basis for managing the impacts of forest sector development on water resources and the environment (refer to 3.1.2.3);
- promoting value addition to the industrial forest sector;
- assisting South Africa's industrial forest sector to realise its full potential in global markets;
- promoting the participation of small-scale growers in the forest sector;

⁶ Note that SAFCOL is not part of DWAF nor report to this Department.

- development of appropriate timber-products standards for South Africa; and
- regulating negative impacts of industrial forestry and create conditions for positive impacts. It is important to note the significant advances have been made in the environmental management of South Africa's forests. A number of the forests have or are applying for environmental certification under the Forest Stewardship Council – and others have been removed because they were planted in areas which were not environmental sustainable.

3.3.2 FORESTRY MANAGEMENT FUNCTIONS

The following forestry functions manage the environment.

3.3.2.1 SUSTAINABLE MANAGEMENT OF NATURAL FORESTS

In overview, this function entails ensuring the conservation, optimal utilisation and scientific management of State forest conservation areas and participation in general nature conservation matters pertaining thereto. It further:-

- actively manages all assets in a participatory manner, for example, through developing a National indigenous forest database and management plans for all indigenous forests;
- issues licences and facilitate community use within a framework for Participatory Forest Management. The current licensing/permitting system for access and use of state forests is, however, still based on the old Forestry Act. A new system in terms of the NFA still needs to be developed and implemented;
- oversees Provincial forests as well as delegations and assignments based on environmental management audits; and
- undertakes ongoing research, observations and rehabilitation.

Closed canopy indigenous forests make up less than 1 percent of South Africa's land cover and are thus a precious resource. In the past, these forests have been managed in a fragmented manner, which has led to the decline and loss of forest resources. For the first time, a national, integrated approach to the country's natural forests is being adopted. This involves building a national inventory of South Africa's forests so that proper management and monitoring can be put in place.

The Department manages only part of the natural forests in South Africa. Provincial Government under delegations from the Minister of Water Affairs and Forestry manage other forests. It is important to ensure that these resources are being managed sustainably, and in line with national policy. For this reason, an audit is being performed to establish the level of management of the Provincial forests. This is a co-operative process, and the audit is performed jointly by national and provincial Departments.

DWAF also continues with efforts to implement more participatory approaches to the management of forests, and to work more closely with local communities. (Reports are available on a number of participatory management initiatives.)

3.3.2.2 FIRE MANAGEMENT

This function includes aspects such as:-

- development and maintenance of a fire danger rating system;
- development of a framework for and formation of fire protection associations as well as the registration of these associations;
- developing and maintaining a framework for fire information and statistics;
- undertaking National public awareness campaigns; and
- providing advice to communities.

3.3.3 FORESTRY STRATEGIES

3.3.3.1 NATIONAL FORESTRY ACTION PLAN, SEPTEMBER 1997

The White Paper on Sustainable Forest Development in South Africa makes a commitment to turn policy into action through a strategic plan, i.e. the National Forestry Action Plan (NFAP).

The NFAP describes specific strategies to implement the functions and responsibilities in respect of the South African forestry sector. Each strategy is detailed in terms of specific goals, indicators of achievement and tasks with responsibilities, timing and risks. Further important features of the NFAP are:-

- it is a framework for action and not a rigid plan (the NFAP is updated and reviewed on a three yearly basis – the first revision is due 2001);
- it is a process of continual improvement;
- it is designed to satisfy national, provincial and local needs while meeting international obligations, e.g. in terms of Agenda 21;
- it is based on wide consultation;
- it focuses on mobilising human resources;
- it incorporates the three principal components of the forest sector, i.e. industrial and community forestry and natural forests;
- it is integrated with wider Government policies, strategies, particularly rural and industrial development and the development of other relevant sectors;
- it incorporates the best lessons learned from experiences within and outside South Africa;
- it is realistic in its objectives and feasible in terms of resources required to achieve them; and
- it ensures that the forest sector is fully integrated with wider resource management, strategies, emphasising links with land-use planning and integrated catchment management.

3.4 RESOURCES FOR IMPLEMENTATION

As established in the previous sections, the Department's mandate and functions focus on sustainable management, control, use and development of water and forestry resources.

This, in effect, implies that in varying degrees, all of the Department's resources are geared towards environmental management of South Africa's water and forestry resources.

Key to the effective and efficient implementation of the roles and functions of the DWAF, is the availability and optimum utilisation of appropriately trained and experienced staff, infrastructure and operational capacity, as well as appropriate budgetary provision.

However, the NWA, the Water Services Act and the NFA have imposed new and extensive responsibilities on DWAF, which require a different structure, professional profile and composition of skills and capacity than DWAF has hitherto had. Although DWAF has been steadily engaged with transformation in response to these Acts, this process has not yet been completed. It should further be noted that this restructuring process is institutional as well as organisational, and may involve moving personnel and budgets between organisations and building new capacity to meet the environmental management challenges in these new organisations. Consequently it is difficult to report on particulars at this stage.

Nonetheless, for purposes of this document the Strategic Plan (refer 2.4.2) prepared annually by the DWAF contains information relevant to DWAF short- to medium-term resources for implementation. It describes, in addition to the Department's legally-mandated core functions and medium-term key objectives at a strategic level, the core functions and responsibilities, key outputs and targets, the details of the Department's budget allocations, organisational structure, and human resources for the relevant financial year.

In broad overview, the water and forestry Regional Offices share administrative and financial management resources where appropriate. Approximately 15% of the Department's exchequer budget is applied towards personnel, 4% for administration and 68% for capital expenditure. Viewed from a different perspective, 28% is applied towards Water Resource Management, 60% towards Water Services and 12% towards Forestry.

Relevant to forestry in particular, the NFAP further details the state of the capacity of Government and other institutions to achieve sustainable forest resource management.

Given the above and with an understanding of the Department's wide range of responsibilities and limited resources, additional funding and assistance was required in order to achieve DWAFs mandate and objectives. Consequently international donor funding and technical assistance plays a critical role in co-ordinating functions and assists in achieving co-operative governance of DWAF activities. For example the integrated water resource management project in association with the Danish Co-operation for Environment and Development (DANCED) as well as the European Union focus on environmental protection and capacity building regarding water services. The Department endeavours to allocate these funds and assistance in an equitable manner in order to balance the different needs of the Department (i.e. Water Resource Management, Water Services and Forestry).

International assistance is received from and relationships have been established with the following countries and institutions (details regarding the nature of these relationships can be obtained from the DWAF Directorate International Liaison): Australia, Denmark, the European Union, Finland, Ireland, Japan, the Netherlands, Norway, Portugal, the United Kingdom, the United States of America and the United Nations.

CHAPTER 4: CO-OPERATIVE GOVERNANCE

The need and importance of co-operative governance within the environmental sector has been recognised in NEMA and section 41 of the Constitution which provides the principles and foundations of co-operative Government and intergovernmental relations. Section 41(1)(h), is particularly relevant. It specifies that all spheres of Government and organs of State must co-operate in mutual trust and good faith by informing one another, consulting on matters of common interest, co-ordinating actions and legislation and adhering to agreed procedures.

NEMA has also provided the basis for co-operative governance in respect of environmental management through the CEC and the drafting and formalisation of environmental implementation and management plans.

Due to the transitional organisational and institutional restructuring environment in which DWAF is currently operating, the EIMP will only broadly address the co-operative mechanisms and arrangements that support alignment around environmental management internally within the Department and externally with other spheres of Government and stakeholders. The document will therefore focus mainly on identifying the areas of co-operation.

This Chapter will thus mainly focus on identifying the areas of co-operation.

It will become evident from this Chapter that there are a multitude of arrangements and linkages with various Departments in respect of resource and environmental management. Due to this and the extent, complexity and transitional nature of DWAF's functions, the former could not be evaluated nor prioritised in great detail.

A recommendation to assess the foregoing has been included in Chapter 7 - addressing *inter alia* priority agreements/arrangements and with which co-operative partners. In addition, mechanisms should be developed or strengthened by which water and forestry related aspects are addressed and incorporated in other organs of State's procedures and processes.

The arrangements and mechanisms highlighted in this Chapter will thus be reviewed and re-evaluated as part of the restructuring and associated processes. Through these processes DWAF will investigate their importance and indicate in more detail how these arrangements ensure internal and external co-operation around environmental management issues and how effective they are in this, in future EIMPs.

4.1 INTERNAL MECHANISMS AND RELATIONSHIPS

DWAF's internal co-operation can be depicted as follows.

DWAF's functions that relate to policy, strategy and regulatory work are undertaken at the Pretoria Head Office. The Regional Offices perform implementation work.

DWAF is a national competency and therefore does not have provincial counterparts. However, co-operation and consultation with Provincial Departments and other agents regularly take place and is addressed throughout the document.

There are nine regional offices that manage water-related issues, both water resource management and water services, one in each Province.

Three Forestry Regional Offices deal with forestry issues in the northern, central and southern areas of the country. The Regional Offices are maintained in King William's Town, Pietermaritzberg and Nelspruit, and area offices occur throughout the country.

Co-ordination is achieved between Head Office and the Regional Offices (Regions) through the sharing of the responsibility for regional activities among Head Office staff and the staff of the Regions in accordance with a structured matrix management system. This refers to a system where competencies (e.g. hydrologists etc.) are concentrated in Head Office on which the Regions can call upon when required. This is done in order to achieve optimal liaison between the policy development and implementation components of the DWAF.

Furthermore, the Regional Chief Directors are represented on the Departmental Management Committee (MANCO) which establishes a direct link between Head Office and the Regions at the Chief Directorate level. In a similar way, Regional Directors are represented on MANCO sub-committees and the Heads of Directors Committee (and standing sub-committees).

The following sections will illustrate the main formalised institutional arrangements and their broad role and functions that ensure internal co-operation around resource and environmental management issues.

4.1.1 STRATEGIC

At a strategic level, the servicing of the entire or broad components of the Department, the following arrangements exist takes place in the following manner:

- The *Executive Committee* which has a policy focus. It comprises the Minister, the Director General (DG) and the Deputy DG's.
- The *Management Committee* (MANCO) and sub-committees are responsible for managing the Department on a strategic level and ratifying policy. It comprises the Director General and Chief Directors.
- *Heads of Directorates Committee* and sub-committees, responsible for policy co-ordination and dissemination of policies. This committee comprises Directors.
- *Regional Directors Committee*. This committee's responsibilities involve broad-brush policy clarification affecting implementation. It is comprised of all DWAF Regional Directors.
- *Audit Committee*. The objectives of this committee are to ensure that management in the Department creates and maintains an effective control environment and that the necessary respect for internal control structures is demonstrated and encouraged at all levels. This committee is comprised of the DG, the Deputy DGs and three representatives from outside the Public Service. The committee's efforts are aimed at achieving DWAF's mandate of ensuring the access and supply of water on a national level and the promotion and development of forestry through monitoring control measures. Further responsibilities include *inter alia* liaison with the Auditor-General (refer Chapter 5) and to oversee and manage the total Internal Audit function within DWAF.

4.1.2 WATER RESOURCE MANAGEMENT

For the WRM functional area the following arrangements are of significance:

- The *Water Tribunal*. It is anticipated that this Tribunal will be established early in 2001. The function of the Water Tribunal will be to hear appeals (the nature of these appeals are defined in the NWA section 148) against certain decisions made by a responsible authority, CMA or water management institution under the NWA. It will be an independent body, whose members are appointed through an independent selection process, and which may conduct hearings throughout the Republic.
- *Water Resources Management Committee* (WRMC), a standing sub-committee to MANCO. Chief Directors and Directors are represented on the WRMC and its functions focus on co-ordination of activities within the WRM functional area and with other functional areas; organisational restructuring of the WRM function; NWA implementation, and corporate issues.
- *Co-ordination Team for the Implementation of the NWA* (TINWA) with both Regional and Head Office representatives (refer 3.1.3.1).
- *Study/Project Management Committees* (PMC). These committees are established to co-ordinate all the components of a study and to oversee budget allocations and programme implementation and are represented by e.g. the Directorates: Social and Ecological Services, Water Conservation, Catchment Management, Water Resource Planning, etc.
- *Project Co-ordination Committees* (PCC). These committees are established for specific projects and tasks (i.e. "how to" meetings) and monitors the progress of these projects. Relevant components within DWAF and if required, outside stakeholders, are represented.

- *Specialist Working Groups.* These groups flow from problems identified during PMCs/PCCs. All relevant components within DWAF and, if required, outside stakeholders are represented.
- *Departmental Advisory Committees on inter alia Aquatic Weeds, Safety of Dams.*
- *Liaison meetings and ad hoc project/study specific interrelationships, e.g. internal liaison related to disaster management, and discussion of line function issues between the Regions and Head Office.*

4.1.3 WATER SERVICES

For the WS functional area the following arrangements are of significance:

- *Water Services Management Committee (WSMC)* - a standing sub-committee of MANCO similar to the WRMC under WRM above.
- *Theme Steering Committees* such as the Monitoring and Evaluation Units established to update and improve Monitoring and Evaluation systems, the Water Board Technical Working Committee and Executive Appraisal Panel. This panel monitors water boards' performance and makes recommendations to the Minister.
- *Regional Co-ordination Committees.*
- *Liaison Committees* - multi and bi-lateral liaison with Regions and other components within the Department.
- *Project Steering Committees* - the same as the PCCs under WRM.

4.1.4 FORESTRY

For the forestry functional area the following arrangements are of significance:

- *Forestry Management Committee* (also a standing sub-committee of MANCO and similar to the WRMC and WSMC described above).
- *State Forest Land Management Unit.* This unit is established to lease and manage State Forest land/property under long-term leases.

4.2 EXTERNAL MECHANISMS AND RELATIONSHIPS

This section addresses DWAF's mechanisms, principal relationships and areas of co-operation and institutional arrangements with other Governmental Departments, stakeholders, Non-Governmental Organisations (NGOs) as well as relationships on international level.

The Department expends significant effort in liaising with other Departments in all spheres of Government, to ensure that its programmes and activities are co-ordinated and, where necessary, integrated with other relevant Government programmes.

Furthermore, the Department has established formal and informal links with non-governmental structures at provincial and local level to ensure full participation and involvement in decision-making.

4.2.1 STRATEGIC

Important Government linkages and mechanisms for co-operative governance around broader environmental management matters related to the water and forestry core functional areas are:

- *Initiation of policy and possible policy changes; amendment to water legislation; conservation, development and management of water resources; use of any water for any purpose; rendering of water*

supply and sanitation services, and treatment and disposal of effluent. The National Water Advisory Council (NWAC) advises the Minister of Water Affairs and Forestry on the listed matters.

- *Political issues relating to the water and forestry matters and issues:* Interaction between the Minister of Water Affairs and MECs via MINMEC meetings.
- *Participative efforts towards integrated Government communication, in particular relating to matters around water and forestry:* Participation in Government Communication Cluster structures.
- *Poverty reduction and job creation:* The Departments of Labour (DOL), Welfare, and Public Works (DOPW).
- *Human resources and financial issues related to water and forestry resource management:* The Departments of Public Service and Administration, and National Treasury.
- *Development issues, Spatial Development Initiatives; Industrial Development Nodes etc.:* The Departments of Trade and Industry (DTI), Agriculture (DA), and Land Affairs (DLA).
- *Long term ecological research:* The Department of Arts, Culture, Science and Technology (DACST).
- *Environmental education:* DEAT and the Department of Education (DE) via the National Environmental Education Programme.
- *Environmental capacity building:* DEAT via the Environmental Capacity Building Programme.
- *National and strategic environmental management:* DWAF representation on the CEC established under NEMA.
- *Disaster management (including flood management):* All National Government Departments and representatives from Provincial Governments via Department of Provincial and Local Government's National Disaster Management Centre. The mission of the centre is to improve knowledge, awareness and understanding of disasters and co-ordinate and facilitate access to information and resources in order to promote and support comprehensive, integrated and effective disaster management in South Africa.
- *Water efficiency and sustainable greening of urban environments:* DWAF along with other Departments are involvement with the Interdepartmental Environmentally Sound Low Cost Housing Team – hosted by the Department of Housing.
- *Sharing of information and requirements of environmental policy and legislation:* All Provincial Departments' MECs and DWAF Regional Chief Directors through Provincial Liaison Committees and associated sub-committees (i.e. Planning Committee (water services and sanitation), Forestry Liaison Committee and the Irrigation Action Committee).
- *Acquisition of land for State development, as well as disposal of severance land:* Interaction with the DOPW.

4.2.2 WATER RESOURCE MANAGEMENT

The WRM approach outlined in the National Water Policy requires integration across a number of dimensions:-

- horizontally, between authorities and organisations with common interests or competing needs for water resources, e.g. between Government Departments;
- co-operatively, within water use sectors with a common interest in resources, for the sake of national prosperity;
- coherently, between organisations involved in the management of scarce resources such as water, land, minerals, finance, the environment; and
- geographically, in consonance with the water cycle's interactions with human activity.

The foregoing is and will be achieved by the mechanisms and arrangements set out in the following sections.

4.2.2.1 WATER RESOURCE MANAGEMENT INSTITUTIONS

Water management institutions concern both statutory Water Management Institutions (WMIs) (i.e. CMAs and Water User Associations – refer below), other statutory bodies (Water Tribunal and advisory committees), and non-statutory bodies (such as catchment fora).

DWAF's functions and activities in respect of the above includes the following:-

- establishment of statutory institutions under the NWA;
- creation of non-statutory consultative and participative bodies/fora;
- co-ordination of the activities of and relationships among these institutions;
- building organisational capacity and that of representatives and staff;
- supporting water resource planning and management activities; and
- ensuring appropriate stakeholder participation in these bodies.

The foregoing will ensure stakeholder participation in WRM at a more regionalised and local level.

Water management institutions:

The NWA sets out the framework for the management of water resources in South Africa. This framework provides for the establishment of WMIs, which include CMAs and Water Users Associations (WUAs).

Catchment management agencies (CMAs)

One of the principal intentions of the NWA is to decentralise the responsibility for WRM to CMAs, CMAs are statutory bodies established⁷ under Chapter 7 of the Act, of which there will ultimately be nineteen to cover the entire country. This is, however, a long term vision and will take place within a timeframe of approximately ten to fifteen years (approximately five should be established within three years and most should be fully functional within fifteen years).

The core purpose of CMAs is to ensure the sustainable use of water resources in their areas of operation, in line with the purpose of the Act (and the principles of equity, efficiency, sustainability and representivity).

A CMA will manage water resources within its WMA (South Africa has been divided into 19 WMAs as part of the progressive development of the NWRS). CMAs must develop and implement a CMS (refer 3.1.3.3) for water resources within their WMA. CMAs provide the second tier of the water management structure provided under the Act (see Figure 4). They operate within the broader framework provided by the Minister of Water Affairs and Forestry and the NWRS. Local implementation of a CMS may be carried out through institutions to which the CMA may delegate functions. The agencies will be funded primarily through the collection of charges for water use.

A major role of CMAs is to manage activities impacting on WRM in their area, and to promote participation in WRM. This requires public participation as well as co-operative governance, enshrined in South Africa's Constitution. The CMA's relationship with Local and Provincial Government will be close since the activities of CMAs and these spheres of government must be mutually supportive. Both Local and Provincial Government will have representation on the CMA governing board noting that Local Government is the only interest that is assured appointment.

DWAF's role in respect of the CMAs is to assist with the establishment of these institutions, provide the enabling environment and eventually play a regulating role. In the absence of a CMA, DWAF will, however, fulfil all the functions required for a CMA.

Water User Associations (WUAs)

A WUA is a statutory body established by the Minister under section 92 of the NWA. WUAs are, in effect, co-operative associations of individual water users who wish to undertake water-related activities for their mutual benefit. WUAs potentially form the third tier of water management under the Act as shown in Figure 4, and will normally operate at a localised level.

The broad role of a WUA is to enable people within a community to pool their resources (money, human resources and expertise) to more effectively carry out water-related activities. Members will thus benefit from addressing local needs and priorities. WUAs also provide a mechanism through which a CMA can devolve the implementation of aspects of a CMS to the local level.

⁷ The Department has prepared, with stakeholder consultation, a series of guides to assist with the establishment of CMAs and WUAs.

WUAs may be established for any form of water use as described in the Act, section 21. This is a significant change from the 1956 Water Act that only provided for the establishment of institutions focussed on irrigation.

A WUA may be concerned with a single purpose or may be multi-sectoral, dealing with a variety of water uses (s21) within its area of operation.

An important initiative currently underway is the transformation of irrigation boards (of which there are approximately 300) to WUAs.

The relationship between CMAs and WUAs:

CMAs are in charge of managing water resources for the whole WMA whereas WUAs will normally have a localised interest. WUAs will assist in the implementation of the CMS at a local level. WUAs may be represented on the CMA's governing board and on catchment management committees. The Act provides that WUAs be established and monitored by the Minister but these powers may be delegated to the CMA providing it with direct control over WUAs. The CMA is the key WRM institution in a WMA (refer Figure 4).

4.2.2.2 GOVERNMENT LINKAGES

The following sections will address the significant Government linkages and involvement in the management of water resources.

Horizontally, there are several Government Departments that have a common interest in water. They tend to be responsible for managing, regulating or representing those groups (in the private or parastatal sector) that compete or impact on water. It is important to be aware of the overlaps between strategies and activities of these Government Departments. These overlaps must be identified and efforts in these directions co-ordinated to optimise benefits, avoid duplication and minimise cost.

As previously noted, this will be addressed through the DWAF restructuring process. Furthermore, NEMA enables role players from various Government Departments to take part in the CEC, which provides an excellent opportunity to address and resolve the foregoing.

Linkages relating to water resource infrastructure planning and development:

The following relationships are either established or potential opportunities for co-operation relating to water resource infrastructure planning and development and the associated impacts. Current co-operation occurs mostly on a study and project bases, with stakeholders mainly at provincial level:

- *Use of tribal land:* Interaction with DOL in particular relating to serving rural communities.
- *Taking away of agricultural land and relocation of displaced people:* DLA and DA (i.e. assisting affected communities in putting them in a better position).
- *Implementing and assisting with relocation of plants (medicinal plants in particular):* DEAT.
- *Environmental impact assessment of projects:* DEAT.
- *Cultivation of medicinal plants:* An opportunity for the DA to become involved.
- *Services provisioning:* Local Government and Parastatals, i.e. ESKOM, TELKOM.
- *Infrastructure – provincial roads (taxi routes etc.):* Provincial Department of Transport.
- *River releases and Reserves:* DEAT Provincial and National.
- *Management of networks of infrastructure, e.g. to allow ecological resetting floods to pass:* Multiple Local Governments (water boards and Local Councils).
- *Project finance:* Department of Finance.
- *Small business support:* DTI (and Small Business Development Corporation).

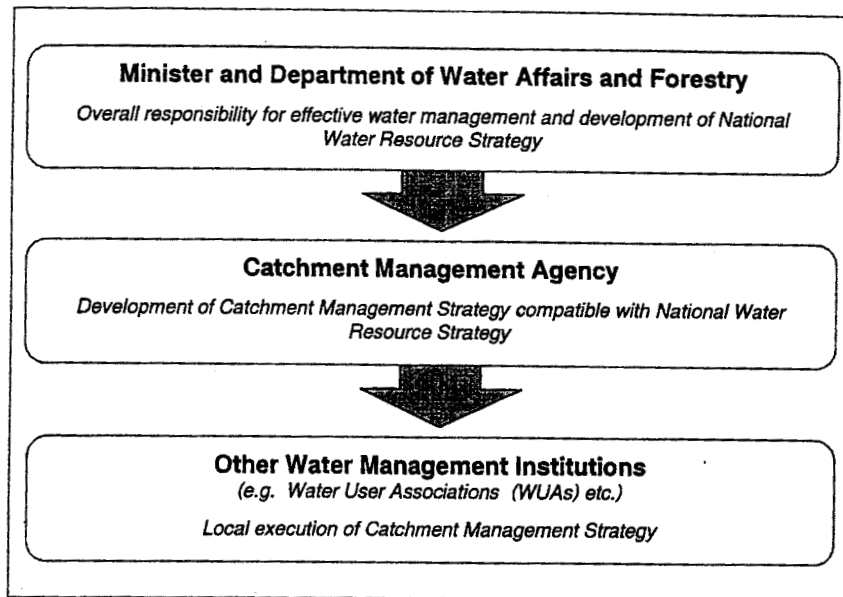


Figure 4: Hierarchy of Water Management Institutions

- Social work related to health aspects such as AIDS etc. – long term maintenance: Department of Health.

Other important Government linkages:

Other important Government linkages / mechanisms for co-operative governance around water resource management in general, are:

- *Linkages associated with the information and consultation processes linked with the confirmation of the NWRS:*
Informing and consulting stakeholders will be the first step in this process. The establishment of formal consultation structures for future co-operation regarding the NWRS, will follow.
- *Department of Environmental Affairs and Tourism (DEAT):*
DEAT and DWAF share common goals, such as promoting sustainable development, and utilisation of natural resources to foster equitable access to the benefits derived therefrom (through Environmental Impact Assessments (EIAs) etc.). DWAF and DEAT also have a Memorandum of Understanding relating to Integrated Environmental Management for prospecting and mining activities.

In addition, DWAF is tasked with waste management in terms of DEAT legislation (i.e. the ECA s20).

DWAF's activities in respect of co-operation and capacity building on the enforcement level (permitting, compliance monitoring etc. of waste sites) entail:-

- DWAF head office co-operates with Provincial Departments of Environment by means of on-the-job training with regards to hazardous waste sites and problematic leachate producing sites; and
- DWAF's Regional Offices provide the same services for all general sites not considered to be extraordinary problematic.

There are, however, further opportunities for co-operation between DWAF and DEAT relating to strengthening working relations regarding water use authorisation procedures and EIAs.

- *Department of Agriculture (DA):*
Some of the DA's activities have a direct impact on water use. DA is, amongst others responsible for the optimal use of water resources through planning and effective use of irrigation water, and the Conservation of Agricultural Resources Act, No. 43 of 1983 addresses the use and protection of wetlands and control of alien vegetation. Furthermore, agriculture is the largest water user sector at

present, and efficiency of water use in this sector is going to receive increasing attention in the management of water resources.

- *Department of Land Affairs (DLA)*
The DLA has an influence on land use and is responsible for land reform and hence water use and the need for water services.
- *Department of Mineral and Energy Affairs (DME):*
DME authorises mining operations that impact amongst others on water resources quality. There is also co-operation in respect of environmental management plans and programmes, management of water quality, rehabilitation of land and permit applications in terms of section 12B and 21 of the Water Act of 54 of 1956.
- *Department of Health:*
Communicating with the Department of Health on the acceptability of permits in respect of air pollution related to waste management.
- *Department of Transport (DOT):*
DOT has an interest in siltation of harbours (which is a by-product of poor land management practises) from a navigability point of view. To a lesser extent, it is concerned with the design/approval of bridge structures across watercourses that could affect the pattern of flooding.
- *Local Government:*
The functional areas of competence of Local Government include a number of activities that are relevant to catchment management, such as municipal planning, water supply and in particular waste management. DWAF co-operates with Local Authorities owning major landfills in terms of advocacy related to waste management.

There is, nonetheless, an opportunity for co-operation with the Departments of Transport and Local Government in respect of the transporting of hazardous waste.

4.2.2.3 NON-GOVERNMENTAL LINKAGES

Important non-government linkages/mechanisms for co-operative governance around water resource management are:

- *Water committees and forums:*
Water committees and forums have been formed in various parts of the country fostering local participation in catchment management matters.
- *Scientific and research institutions:*
Key role players regarding the protection of the ecological integrity of water resources are institutions such as the Council for Scientific and Industrial Research (CSIR) and Water Research Commission (WRC), who, through their research programmes, fund investigations into various aspects of quality of the environment in the water sphere.

The WRC focuses on water related research – it interacts with the WRMC for guidance regarding areas requiring research and development of tools for WRM. The WRC steering committees are also mechanisms for co-operation (e.g. via participation by the Department of Agriculture and others).

The forestry component has a similar research body under the auspices of the University of Pretoria – the Forestry Agriculture and Biotechnological Institute - that focuses on research relating to forest protection.

Directed funding towards such co-operative programmes could have a major effect on creating a knowledge base and networks for co-operative management. In addition, the broadening of the scientific fraternity's knowledge regarding water resource management and services provision also contributes to better environmental management.

- *Other bodies:*
There is a large number of organisations concerned about various aspects of the social and biophysical environment that also impact on water resources, i.e. formal structures like South African National

Parks and the regional Parks Boards, Wildlife and Environment Society of South Africa, Endangered Wildlife Trust, Environmental Justice Networking Forum, Group for Environmental Monitoring etc. Others have more specific interests and although less formal, participate actively in response to specific problem areas (e.g. wetlands) and development proposals that threaten certain aspects of the water environment.

4.2.2.4 WATER USER SECTORS

The National Water Policy makes a clear call for co-operative management between water use sectors with a joint interest in a water resource, and in doing so to strive for common goals. Many of these sectors have mobilised their members into some type of institution that provide representation of users in that sector. Examples of such institutions are listed below:

- **Mining: Chamber of Mines**
Apart from their projected water requirements, mines will generally have a major involvement in water quality matters.
- **Water Boards: Association of Water Boards**
In addition to its primary activity of providing water services to other water services institutions, a water board may also provide catchment management services and perform water conservation functions.
- **Business: Business South Africa**
Represent the interests of certain business sectors in South Africa.
- **Agriculture: Agri – SA (formerly SA Agricultural Union)**
In looking after the interests of farmers, this highly mobilised organisation negotiates on various issues affecting farmers.
- **Forestry and Sugar:**
In terms of the Chapter 4, s36 of the NWA, SFRA's require water use authorisation / licensing as a form of controlling or regulating water use.

Forestry is a declared SFRA. To ensure representation of the forestry industry regarding NWA related matters, two institutions have been formed, namely, Forest Industries Water Committee (at national level) and Forest Industry Water Liaison Committees (at regional level). In addition, with the promulgation of Chapter 4 of the NWA in 1999, the Provincial Afforestation Review Panels transformed to what are now known as SFRA Licence Assessment Advisory Committees (SFRA LAACs).

The primary objective of LAACs is to offer advice and make recommendations, based on social, economic, technical and ecological knowledge related to the licensing process.

These committees are excellent mechanisms for promoting co-operative governance. By the nature of their constitution they will integrate the requirements of relevant external national and provincial legislation into their procedures. The composition of these committees varies somewhat from Province-to-Province but membership should in the future reflect the following. Representatives from CMAs and other WMIs, DWAF (both WRM and Forestry), Provincial Department of Economics, DEAT – National and Provincial, DA, DLA, Provincial Department of Housing and Local Government (PDH&LG), organised forestry industry, organised agriculture, and environmental and development NGOs.

These committees are excellent examples where interaction between departments takes place from an early stage in an authorisation procedure.

At present DWAF is also in the process of negotiating with the SA Sugar Association (SASA) to consider the declaration of dryland sugarcane as a SFRA.

- **Power Sector: ESKOM**
Water used for power generation is almost exclusively associated with the activities of ESKOM. It is regarded as a strategic use and will therefore be treated as such in the NWRS.

There is established liaison between DWAF and ESKOM through an ESKOM DWAF liaison committee that meets twice yearly to discuss *inter alia* the NWRS, pricing strategy, water allocations to ESKOM. In

addition there is a planning sub-committee that addresses issues at project level, for example, hydro electricity generation, project specific planning, operating rules, agreements etc.

4.2.3 WATER SERVICES

The following mechanisms and arrangements, related to the environmental functions prioritised for water services, pertain to co-operation in respect of water services.

4.2.3.1 WATER SERVICES INSTITUTIONS

The Water Services Act differentiates between water services authorities (governance) and water service providers (provisioning function). The water services authority (WSA) is the municipality responsible for services delivery whilst the water services provider (WSP) is the structure which actually provides water services to consumers, e.g. the WSA itself, another authority, a water board, a community based structure or a private enterprise. The Water Services Act regulates the relationship between authorities and providers (refer Figure 5).

DWAF's role focuses on providing water services institutions with assistance in developing capacity to fulfil their obligations in terms of the Water Services Act and include sub-functions such as:-

- developing capacity building and training approaches and strategies for Local Government as well as provision of assistance to water services institutions by developing a framework⁸ within which to develop capacity to fulfil their obligation in terms of the Water Services Act;
- monitoring the performance of water services institutions and water boards and assisting them to reach an optimal operational and management level⁹;
- ensuring that capacity of the WSAs is built to prepare them to accept transferred schemes that could then be maintained in a sustainable manner. The Department plays a very important role in supporting the WSAs with their water services activities. This is done by providing advice pertaining to the planning process, and making national level information available. In both these instances the WSDP is an important tool. This national level support role will be undertaken in co-operation with the DP&LG;
- building the capacity of the WSP¹⁰ (if necessary) to ensure effective provision of water services, forms part of the institutional support required from the DWAF;
- providing technical and financial support; and
- capacity building in the sanitation sector (as well as within communities).

DWAF has further established mechanisms to:-

- mobilize implementing agents as partners in delivery;
- co-ordinate with other infrastructure programmes; and
- enhance business planning processes by establishing/empowering Regional Appraisal Committees.

4.2.3.2 REGULATION AND THE ROLE OF LOCAL GOVERNMENT IN THE PROVISIONING OF WATER SERVICES

DWAF has a responsibility through the Water Services Act to ensure the regulation of water services (refer 3.2.2). This requires that it set up a legislative framework, gather information from the WSAs, monitor the performance of WSAs, and take action when necessary. This national level regulatory role will be

⁸ The Department issued a redrafted *Strategic framework for water services support functions* in May 1999. The objective of this document was to provide a framework within which the water services support function of the Department would be carried out, promoting co-operative governance and effective delivery of services. Building the capacity of Local Government to perform its WSA function is critical to the success of the water services business. Problems of capacity face all sectors, and close inter-governmental co-operation will be necessary to support Local Government.

⁹ Guidelines for Water Board Policy Statements, Business Plans and Annual Reports are being developed. The processes for monitoring these are now being considered. It is likely that a Monitoring and Evaluation (M&E) system will be required to support this monitoring. Such a system is likely to record targets, and use benchmarks in much the same way as the system for WSDPs.

¹⁰ The Department further assists bulk WSPs (water boards) to compile their Business Plans. These Business Plans set out the strategies and the procedures on how their objectives will be achieved and deals with the consumer profile, service levels, technical options, environmental management and financial issues. The compilation of Business Plans and the WSDP promotes a close working relationship between services providers and services authorities, and therefore improves co-operation within the planning process.

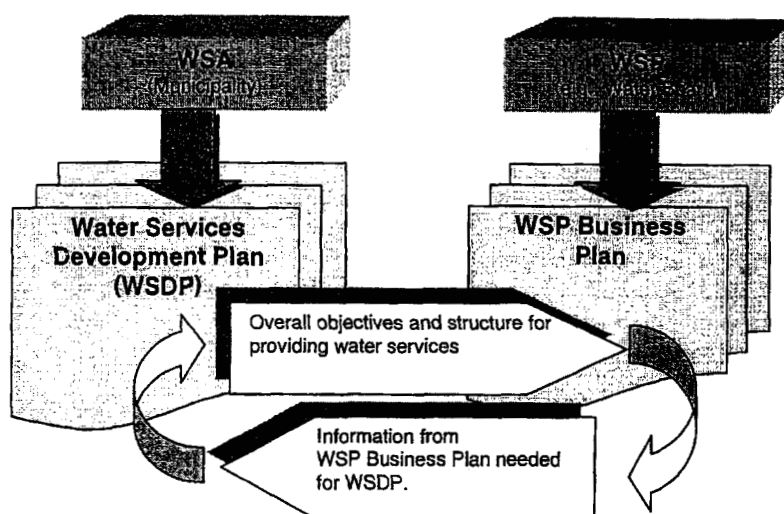


Figure 5: Relationship between WSAs and WSPs

undertaken in co-operation with the entire sector (e.g. the DP&LG and other provincial Governments etc.) due to a Cabinet decision that water services should be managed in an integrated manner.

Water Services is thus an integrated Government responsibility with Local Government at the centre. However, due to lack of capacity and inadequate funding at local level which resulted in insufficient service provision, the Department has geared itself to provide a co-ordinated water services support programme to Local Government. In terms of this programme, Local Government is being assisted to operate WSDPs (refer 3.2.2.2).

The Water Services Act provides the framework within which Local Governments can choose services providers such as public or private companies best able to meet the needs of the communities. The Department is assisting in this by producing model contracts as well as regulations to ensure that Local Government receives appropriate assistance where it chooses to use the services of other organisations.

The importance of Local Government cannot be over-emphasised in the sustainable provision of water services. In view of the challenge facing Local Government in upgrading and giving proper maintenance to existing systems, a programme to recapitalise new Local Government must be considered if the new district municipalities are to manage their functions adequately, in particular with respect to better **sanitation**.

The Water Services Act and sanitation policy focus on the roles and functions of the various water services institutions responsible for providing sustainable water and sanitation services. One of the key aspects is building effective partnerships between these institutions and end-users. End-users must play a central role in all decisions that affect them. Furthermore, the service must be appropriate to the environmental conditions in an area; sustainable and cost effective to the users, on a long-term basis; and result in improved hygiene and environmental health conditions.

Better sanitation can thus be achieved through acknowledging the range of factors that promote sound management and improved health and hygiene awareness, and which enable end-users to make informed choices around their options for optimising good household sanitation. Local authorities share responsibility with individual households for achieving better sanitation.

The foregoing highlights the need for management of the environmental impacts of this service as well as for intensive co-operative governance in this respect, in particular related to human health.

On a strategic level, current co-operation for sanitation transpires via the National Sanitation Task Team (NSTT) represented by the following Government Departments: DWAF, DEAT, the DP&LG, DH, DE and the Department of Health. The NSTT is responsible for developing and maintaining national sanitation policy. The NSTT's executive arm – the National Sanitation Co-ordination Office (NaSCO) avails support in respect of the implementation of sanitation policy, supporting documentation, resource materials etc. Additional technical, institutional and social support is also available from a range of other agencies within government, NGOs and the private sector.

4.2.3.3 OTHER GOVERNMENT LINKAGES

Further to the above, the areas of co-operation and linkages related to water services are addressed by the following Government department committees and other arrangements:

- *Provincial liaison committees and Provincial Water Services Forums in all provinces.*
- *Multi-and bilateral committees:*
 - Water Services Integrated Programme;
 - Municipal Infrastructure Programme and Integrated Development Plans – in association with the DPLG and Municipal Infrastructure Task Team (MITT); and
 - with other departments such as the National Department of Housing; Department of Public Works; Department of Education.
- *Sanitation programme* – interdepartmental committee comprising all state departments and certain NGOs.
- *Technical committees with provincial and local government representation at a provincial level.*
- *Tasks teams focussing on the development of policy, norms and standards.*
- *Steering committees at project level comprising the relevant departments and communities.*
- *Water and sanitation delivery mechanisms:* National, provincial and local government, NGO's, CBO's bilateral and multilateral agencies, representatives from labour unions, water boards and industry representatives.
- *Responsibility for services such as pumping and treatment from source, main transmission lines and reservoirs in urban and peri-urban area:* The Department Provincial and Local Government (formerly the Department of Constitutional Development).
- *"Internal reticulation" (distribution from main pipelines to consumers) in the same areas:* Department of Housing (DH).
- *Environmental impact assessments of water services projects:* National and Provincial DEAT through DWAF initiated Project Stakeholder Committees. In addition, *working arrangements in respect of environmental impact assessments of activities not listed in terms of Regulations 1182 under the ECA:* DEAT National and Provincial – with at this stage only an agreed process in the Eastern Cape. This system will be nationalised (e.g. relationships could be escalated to Major Metro's as well as other Department's with water related responsibilities) and incorporated in the Environmental Management Framework of DWAF (refer Chapter 6).
- *Joint planning for water services programmes:* Provincial and Regional Water Services Forums.
- *Facilitation of integrated identification, planning, selection and approval for water services and sanitation projects:* DEAT, through a Special Liaison Committee (not, however, functioning at the moment).
- *Evaluation of Development and Business Plans for the Consolidated Municipal Infrastructure Programme:* DP&LG.
- *WSDP guides, capture programmes, decision support programming and reporting as well as submission process:* Multi-disciplinary Assessment Committees.
- *Capacity building of supply and sanitation professionals:* National Sanitation Co-ordinating Office and the National Community Water Supply and Sanitation Training Institute.
- *Preparation of guidelines for the provision of engineering services and amenities in human settlements:* DH.
- *Ensuring that District Municipalities (DMs) and Local Government assume their responsibilities in terms of the Water Services Act:* DWAF, PDH&LG and DMs via the Integrated Water Services Management Forums (e.g. as established in the Eastern Cape Region).

- *Efficiency of water boards and the DWAF's appraisal process of water boards:* SA Association of Water Boards.
- *Implementation of projects at project level:* Community-based Project Steering Committees.
- *Regulation of water services provision, water supply and public health:* WSPs/Local Authorities and DH.
- *Water services delivery partners:* DWAF, water boards, NGOs, Transitional and Rural Councils and private sector water services implementing agents.
- *Integrated water services management:* Provincial Liaison Committee and Task Teams, Provincial Water Services Forum and District Forums.

4.2.4 FORESTRY

The following are co-operative mechanisms and arrangements, related to the environmental functions prioritised for forestry.

4.2.4.1 DEVELOPMENT AND MAINTENANCE OF FOREST POLICY

DWAF is mandated to ensure the development of overall forest policy. This involves *inter alia* liaison with stakeholders and international involvement as addressed under 4.2.5.2.

The Department also provides support to the *National Forests Advisory Council*, the body appointed to advise the Minister on Forest policy. The NFA makes provision for a national council to assist the Minister of Water Affairs and Forestry on all aspects of forest policy. The Council has certain responsibilities under the Act, including the establishment of two important committees. Firstly, the Committee for Sustainable Forest Management will oversee the establishment of environmental standards for forestry. Secondly the Committee on Forest Access will oversee the use of forests for recreational and cultural purposes. The Act gives the public right of access to all State forests, and the committee will facilitate important aspects related to this. Council members include representatives of environmental groups, community organisations, forestry companies and wood processing industry.

4.2.4.2 CREATING A COMPETENT NATIONAL FORESTRY FUNCTION

A competent National function will be achieved through:-

- developing a strategy for creation of an effective national forestry function;
- developing business plans;
- developing a national forestry function competence and capacity;
- identifying the best institutional option to deliver core functions;
- clarifying roles and responsibilities of spheres of Government. National Government currently manages forests in protected areas as well as delivers services and support to communities. This will, however, only be until capacity at provincial and local levels is developed. Provincial and Local Government will, in time, take responsibility for the foregoing. The forest sector will develop successfully only if National and Provincial Government assume the relevant roles and responsibilities in respect of these functions and provide a framework for successful individual and community initiatives; and
- establishing co-operative governance structures.

4.2.4.3 DEVELOPING AN INTEGRATED FOREST SECTOR

Achieving the development of a forest sector, that is integrated with overarching natural resources (water and environmental) policies and strategies in South Africa through co-operation in particular with DEAT and Provincial Governments, will entail the following:-

- initiating Strategic Environmental Assessments (SEAs) for industrial forest sector development;
- formulating and implementing consistent procedures for joint development of forest sector strategies;
- developing and implementing methods for supporting local development planning;

- participatory development of forest-sector policy for the use, conservation and protection of water resources;
- participatory development of policy for the conservation of biological diversity;
- inserting forest objectives and criteria into regulations in terms of the ECA to ensure that sustainable forest and woodland management plans are supported;
- reconciling regulations in terms of the ECA with the results of SEAs for forest sector development and avoid unnecessary constraints on afforestation;
- promoting, implementing and monitoring adoption of criteria and indicators of sustainability into planning procedures (refer to Annexure 1); and
- devising and implementing a communication plan to communicate principles, criteria and systems for sustainable forest management to stakeholders.

Further to the above, the co-operative and stakeholder relationships relevant to the various focus areas of forestry, i.e. **industrial / commercial, community, urban and natural forests**, are detailed in the NFAP. However, the following extracts highlight the major co-operative relationships, arrangements and responsibilities.

▪ *Commercial/industrial forestry:*

The responsibility for managing State-owned commercial plantations forest assets was transferred to the SAFCOL in 1992. Through its shareholding in SAFCOL and its ownership and management of the plantations of the former homelands, Government continued to play the major ownership role.

The White Paper on Sustainable Forest Development in South Africa, however, affirms Government's commitment to withdraw from this function which is incompatible with the regulatory and advisory role envisaged for Government. The restructure of SAFCOL, in line with the National Framework Agreement on Restructuring of State Assets, is well underway.

The following relationships have been established in respect of the above:

- *The restructuring of commercial forestry:* The Department of Public Enterprises (DPE) and DLA.
- *Development of industrial forestry and forest products industries:* DTI.
- *Matters relating to SAFCOL:* DPE.
- *Sustainable development of the industrial forest sector:* Industry, Provincial and Local Government, NGO's, DTI, DEAT, Unions, DPE, Development Banks Southern Africa, DLA, SABS trade representatives, and consumer groups.

▪ *Community forestry:*

A range of organisations at national, provincial and local levels support community forestry:

- Government partners, in addition to the DWAF, currently involved or having the potential to be involved in community forestry and the sustainable management thereof include the DLA, DA (Resource Conservation), DEAT, DME, DPE, Central Statistical Office, Provincial and Local Government, NGOs, CBOs, communities via community forestry agreements, and various agents for conservation and environmental management.
- DWAF is currently taking the lead (and will maintain this function until capacity at provincial and local levels is developed) in providing community support services but intends to shift from its current role of field-level service provision to that of a broader support service. The National DA (and other larger field-level extension staff) and its Provincial counterparts, as well as NGOs and Community Based Organisations (CBOs), are recognised as more appropriate vehicles to deliver direct community support as part of a wider unified extension system at provincial and field levels.
- Local Government is currently not a service provider, there is, however, strong sentiment that it should be the main driver for development planning and implementation.

Furthermore, other civil society institutions such as District Development Fora and the South African National Civics Association also have the potential to play an important role in planning, co-ordinating and facilitating development. They can draw together interest groups from within Government and elsewhere, and they represent generally marginalised sectors of society.

▪ *Urban forestry:*

DWAF has recognised a responsibility for urban environments and is *inter alia* facilitating an initiative regarding the incorporation of urban forestry/greening principles and practices in local government planning.

DWAF only has a handful of full-time urban forestry extensionists. Nevertheless, the following stakeholders are becoming or have been actively involved in urban community forestry:-

- Municipalities are the most important service provider of urban forestry, but often lack the skills and capacity to implement urban forestry;
- DEAT National and Provincial;
- National DA;
- NGOs (such as Trees for Africa) and CBOs who act to improve local urban environments through urban greening initiatives, providing training and fund-raising services;
- corporate sector and local businesses through social investment; and perhaps most importantly
- individuals planting trees.

▪ **Natural forests:**

A considerable number of institutions are involved in the management of natural forests in South Africa. These include several National Government Departments, as well as usually more than one Department in each Province. National and Provincial conservation agencies are particularly important.

The rights of people neighbouring state-owned forests are also increasingly recognised and accommodated through their involvement in the management of these areas (i.e. participatory or joint forest management).

The NFAP, however, states that although policies are now emerging for a consolidated, holistic approach to the management of natural forests, the institutional framework dealing with this resource still reveals gaps, overlaps and divergences in legislation and competence and should be/are being addressed.

DWAF, representing National Government, is ultimately responsible for the proper protection and management of State forests. Responsibility for the administration of State forests lies with the appropriate Provincial Authorities. Government has a co-operative governance approach to State forests, with DWAF supporting each Provincial Authority in appropriate ways to achieve administration of these resources. Provincial Governments, however, have indicated a varying degree of capacity to assume their roles, consequently a phased approach to the achievement of concurrent competence is adopted. Where Provincial capacity is strong, administration is assumed and DWAF provides technical support and monitor performance, where it is not, DWAF continues administration but with progressive transfer of capacity and skills to the designated Provincial Authority.

Most of the natural forests, however, falls outside the administration of DWAF. These areas are either the responsibility of the National Parks Board, Provincial Administrations, conservation agencies, Local Authorities, or are on privately owned commercial farms with special emphasis on the development and application of community based methods of management and resource sharing. In communal areas extension services take the lead and Provincial Governments remain major role players on private land and in provincial reserves. It remains thus that providing and co-ordinating services for the sustainable management of forests, outside State forest land, is complex, given the diversity of land ownership and agencies involved.

The following relationships have been established in respect of the above:

- *Auditing of management of Provincially managed forests:* DWAF and Provincial Government Departments as well as independent experts.
- *Sustainable management of forests in general and management of natural forest and woodland areas in particular:* DWAF, DEAT, DA (Resource Conservation), Central Statistical Office, DME, Provincial and Local Government, NGOs, CBOs, communities via community forestry agreements, and various agents for conservation and environmental management (e.g. National Parks Boards etc.).
- *Aspects relating to community use and deforestation:* the Committee for the Convention on Combating Deforestation.

▪ **Co-operation relating to broader environmental matters:**

The following areas of co-operation and relationships have been identified for broader environmental aspects related to forestry and forestry management:

- *Development standards and indicators relating to sustainable forest development management:* The National Forest Advisory Council's Committees for Sustainable Forest Development and Management.

- *Human resource development and labour:* DOL; Bargaining Councils and Statutory Councils (established in terms of the Labour Relations Act); industry stakeholders; Employment Standards Commission; Presidential Commission on Labour Market Policy; tertiary education institutions; employers; DE; National Training Board; South African Qualifications Authority; Commission for Conciliation, Mediation and Arbitration; and private training centres and companies.
- *Development of forest research, technology and innovation:* The Forest Research Co-ordinating Structure, DTI, DACST and industry.

4.2.5 INTERNATIONAL CO-OPERATIVE RELATIONSHIPS

DWAF has recognised the importance of maintaining good relations with neighbouring countries with whom resources are shared. A Directorate for International Liaison was established in 1999 to facilitate and co-ordinate negotiations with South Africa's neighbouring states.

4.2.5.1 WATER SECTOR

Water resource management:

The SADC Water Sector Co-ordination Unit (SADC-WSCU) was established by SADC in 1996 to co-ordinate activities in the water sector. The WSCU is based in Lesotho and is housed by the Government of Lesotho. The WSCU supports the following committees:-

- the Sectoral Committee of Ministers for Water;
- the Sectoral Committee of Senior Officials for Water;
- the SADC Water Resource Technical Committee (SADC-WRTC), and
- sub-committees of the WRTC.

The four shared water basins of South Africa are the Senqu-Orange, Limpopo, Incomati and the Maputo basins. These rivers represent the most developed trans-boundary watercourses in the SADC region and in several cases the demand already exceeds the availability of water.

A number of formal "Joint Water Commissions" and less formal "Joint Technical Water Committees" have been established to discuss and negotiate issues of common interest or to manage shared water resources or implement joint development projects. The best known is the Lesotho Highlands Water Commission, which is responsible for the overall management of the Lesotho Highlands Water Project. Two agencies have been established to implement the project, namely:-

- the Lesotho Highlands Development Authority to implement the components of the project in Lesotho; and
- the Trans Caledon Tunnel Authority to implement the components in the RSA.

A Joint Water Commission between RSA and Swaziland oversees the implementation of the Komati Basin Project. The design, construction, operation and maintenance of the two dams (one in RSA and one in Swaziland) has been entrusted to a Bi-National Authority, the Komati Basin Water Authority (KOBWA).

The other committees and commissions like those with Mozambique, Botswana, Namibia and Zimbabwe are dealing with the Limpopo, Orange and Maputo basins. They are not so much in the public eye, but equally as important.

The foregoing relationships are and will be governed by the *SADC Protocol on Shared Watercourse Systems* which was first adopted in 1995 and came into force in September 1998. A Revised or Amended Protocol was signed at the SADC Summit in August 2000.

The protocol describes several measures to ensure the realisation of the above objectives. State parties shall, individually and where appropriate, jointly, protect, preserve and manage ecosystems of shared water resources by:-

- preventing, reducing and controlling pollution;
- preventing introduction of alien and new species;
- protecting and preserving aquatic environment and ecosystems of shared water resources;
- entering into consultation regarding the management of shared water resources and through e.g. the establishment of joint management mechanisms; and

- prevention and mitigation of harmful conditions etc.

One of the main drives of the SADC Water Sector is the SADC Water Sector Regional Strategic Action Plan. A total of 31 projects have been identified and prioritised and the International Donor Community is currently being approached for funding. Other SADC Water Sector initiatives, which have already been implemented, are:-

- the Zambesi River Action Plan;
- the SADC Hydrological Cycle Observing System (SADC-HYCOS);
- the Regional Ground Water Management Programme;
- the SADC Water Week Workshops which were held in 1999;
- development of a Southern African Water Vision;
- the WaterNET, a capacity building initiative for education institutions in water resource management;
- A Research Fund and a Consultancy Fund on integrated water resource management;
- the SADC Water Demand Management Programme; and
- the Southern African Water Information Network (SAWINET).

Another mechanism through which co-operation in the SADC region as well as the rest of Africa can be achieved, is the launch of *Water South Africa* by the private sector in 1999. Through this important initiative, the private sector anticipates to export South African expertise in water resource and water service management and development into the rest of Africa. *Water South Africa* is supported by DWAF and the WRC as an important mechanism to strengthen South African expertise and to promote the expertise of South Africa's neighbours.

Water services:

The South African Government, through the National Departments of Water Affairs and Forestry and Provincial and Local Government, their provincial counterparts, municipalities and other representatives structures, has collaborated with the European Union, the United Kingdom, the Netherlands and France to develop the multi-faceted Masibambane programme. The programme will be implemented over a three-year period, starting April 2001.

The objective of the programme is to provide basic water supply and sanitation services through a variety of activities including the support of strategic policy development, water sanitation services provision to selected poor rural communities in three provinces (Northern Province, Kwazulu-Natal and Eastern Cape). One of these critical activities is focused on identifying the needs and developing a work plan to satisfy the environmental needs of the programme.

A proposed Environmental Evaluation System (EES) has been developed in DWAF: Eastern Cape Region with European Union funding and will be reviewed and implemented as one of the actions in the Masibambane programme at Provincial and Local Government level for water related projects.

The Environmental Evaluation System (EES) has been developed for DWAF water services funded projects, but was soon realised that the evaluation system can be implemented for all water related projects (in-house and funded). This evaluation system promotes co-operate governance and working arrangements through all spheres of the government for water related projects, and is already widely excepted and implementation thereof has commenced in the Eastern Cape and Western Cape Regions.

The evaluation system will be further implemented as part of the Masibambane programme in Kwazulu-Natal and Northern Province. Other mechanisms will be established to implement this evaluation system in the other Provinces as an environmental management tool under the IEM Framework of DWAF (refer Chapter 6).

4.2.5.2 FORESTRY SECTOR

One of the key areas of involvement of the Department is the international negotiation on Sustainable Forest Management under the auspices of the United Nations (UN). DWAF has participated actively in these discussions and played a strong role in formulating the recommendations on a global programme of action on forests to the UN General Assembly.

There are also several other areas of international co-operation relating to international forestry conventions and implementing appropriate provisions in South Africa, including a variety of forest processes in the SADC, most notably is the development of a SADC protocol on trade in forest products.

4.3 PUBLIC PARTICIPATION AND CAPACITY BUILDING

The following highlights participation and capacity building efforts of the Department, to illustrate DWAF's commitment to co-operative governance as well as compliance with NEMA's section 2 principles (refer Chapter 5, Table 2).

4.3.1 PUBLIC PARTICIPATION

Due to policy and legislative requirements, there is an obligation for government to engage in public participation processes. Examples of such legislation and policy, among others, are:-

The NWA and the White Paper on Water Policy (30 April 1997):

Section 2 of the National Water Act states the purpose of the Act and mentions among others, to redress the result of past racial and gender discrimination, to promote sustainable use of water in the public interest, and to facilitate social and economic development.

Section 2 also states that for achieving this purpose the establishment of institutions with appropriate community, racial and gender representation is necessary. To achieve this representation as required by the Act, public participation is necessary.

Examples of sections requiring public participation are Sections 5, 8, 78 and 92. These sections require that a notice must be published in the *Gazette* inviting written comments on the relevant issue. Further, steps necessary to bring the contents of the notice to the attention of interested parties must be considered and subsequently any comments must be taken into consideration before a final decision is made.

The White Paper on Water Policy is a good example of the commitment of the Department to engage in public participation. Section 1.3 of the document articulates the public participation processes that helped produce a set of principles for the new water law. Section 8.1 undertakes to undergo public participation processes with communities, water users, academic institutions, scientific councils and Government for the purpose of the development of a new National Water Bill and regulations for the implementation of the policy.

Important and strategic initiatives regarding stakeholder and public participation that should be noted here are the mechanisms currently being developed and implemented through the preparation and confirmation of the NWRS and CMSs.

The Water Services Act and the White Paper on Water Supply and Sanitation:

Section 72 of this Act states that anything required to be done by the Minister, in terms of this Act, after consultation with another person or body, requires the Minister to request written comment of that person or body and to consider any comments received.

The White Paper on Water Supply and Sanitation, one of the documents on which this act was based, states that involvement and empowerment of people are paramount in the provision of water and sanitation services in poor communities. The policy also states that for sustainable progress there is a need for the involvement of communities in the planning, design, financing, construction and maintenance of improved water supplies. The process of public participation is the ideal way to fulfil this need.

The NFA:

Section 1(f) of this Act states that one of the purposes of this Act is to promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination.

Section 54 requires that before any regulations are made in terms of this Act, the Minister must publish a notice in the *Gazette* and invite written comments on the proposed regulation. All comments received must be considered.

The NVFFA:

Section 21 requires that before any regulations are made in terms of this Act, the Minister must publish a notice in the *Gazette*, and invite written comment. All comments received must be considered.

Section 4 of this Act rules that the official or authority should proceed fairly in respect of all persons entitled to be heard.

DWAF is thus required and obligated to carry out public participation. DWAF's acts and policies clearly indicate that the Department is committed to incorporating public participation in its activities. There is, however, a shortcoming in the sense that the legislation is vague in its description of *how* and *to what extent* this should be done. The Department therefore decided to produce a generic public participation guideline. The guideline is aimed at illustrating a generic approach to public participation in order to assist DWAF officials in understanding public participation processes as an aid to decision-making. The generic guideline is further aimed at assisting the Department in applying public participation within the scope of DWAF's activities. It is anticipated that these guidelines will be finalised in August 2001.

Within DWAF, public participation refers to the ongoing, interactive process between role-players aimed at improving decision-making during the design, implementation and evaluation of development policies, plans, projects and programmes. It requires the involvement of all stakeholders, including traditionally marginalised groups, women and youth, and the views of stakeholders are considered by decision-makers for inclusion into the decision-making process.

The main objective of public participation is to improve informed decision-making. Informed decision-making enhances sustainable development. The process of public participation greatly contributes to understanding the social (as well as the economic and bio-physical) aspects of all DWAF's development initiatives.

4.3.2 CAPACITY BUILDING

DWAF in its activities strives towards all stakeholders being granted the opportunity and support to participate meaningfully according to their ability in WRM, water services provision and forestry management.

The following principles are being acknowledged or applied within DWAF in respect of capacity building:-

- it empowers stakeholders because it offers them the opportunity to develop knowledge, skills and resources necessary for achieving equitable and effective participation which in turn contributes to their ability to control their own lives and operations;
- all stakeholders must be informed and empowered so that the opportunity is provided for them to contribute effectively and on an equal basis. Capacity building can ensure that all stakeholders realise the importance of their involvement in public participation. Special efforts must be made for previously disadvantaged communities and marginalised groups within these and other communities. Empowerment and capacity building of the previously disadvantaged individuals and groups must take place as one of the first steps of the participation process. This is to ensure that they are given the appropriate support to participate meaningfully; and
- the importance of involvement lies therein that the previously disadvantaged individuals collectively possess relevant experience and knowledge, both indigenous and modern. They understand their own situation best and their involvement will result in a higher level of effectiveness and sustainability than could be expected from externally exposed solutions. It is thus important to acknowledge the contributions to be made by indigenous knowledge.

Capacity building thus ensures that those responsible for the various aspects of WRM, WS and forestry management are able to effectively fulfil their roles and responsibilities.

Capacity building by means of (amongst others) training and awareness programmes is interwoven through out all DWAF's activities in all three the functional areas to ensure compliance with DWAF's mandate, vision and mission (refer to Chapter 2).

Examples of such programmes are the "2020 Vision for Water" Schools Project. One of the missions of the project is the development of life skills and value systems among learners, teachers and parents, to promote the efficient, equitable and sustainable use of water.

The Department further developed a training and capacity building strategy regarding Resource Directed Measures – focussed at both the DWAF Regions as well as other agents. There is also a new overarching initiative, namely development of a Water Sector Capacity Building Strategy. It has brought together the

water sector as a whole to develop a strategy within the framework of national development and co-operative governance as well as education and skills development policy.

Furthermore, the following mechanisms or considerations are in place for the water services and forestry components to **capacitate the provinces** regarding performance of functions delegated to them in terms of water and forestry legislation:

Water services:

Water Services is a local government competency. Refer point 3.2 – the main focus is thus on the capacitation of local government and other WSA's.

The provinces are, however, capacitated through processes associated with provincial strategies and through partnerships between Provincial Departments. Furthermore, through integrated programmes and the Water Services Management Forums which have both Provincial and Local Government representation. Local government and Provincial Departments are co-custodians of these programmes.

Forestry:

This aspect is addressed in more detail under point 3.3, i.e. the management of indigenous forests and service provision relating to community forestry etc. It should, however, be noted that the process for delegating forest management responsibilities to provinces is currently being reviewed.

4.4 SHORTFALLS IN CO-OPERATION

DWAF and its co-operative partners should consider the following regarding "integrated co-operative management and governance".

The components for successfully implementing the integrated co-operative management and governance are *inter alia*:

- championship;
- resources;
- political will;
- pragmatism regarding policies;
- understanding of processes and alignment of strategies; and
- teamwork (co-operation between government parties):
 - common understanding of problems;
 - shared goals and objectives;
 - integrated strategies – roles and responsibilities, action plans etc.;
 - mandates and powers;
 - organisation;
 - motivation;
 - capacitation;
 - synergy; and
 - mutual trust, amongst many others.

Most of these components are lacking in current processes. It is further important to understand / realise that the above elements will only be developed and implemented in a progressive manner. What is critical though is co-ownership of the process and real participation.

CHAPTER 5: COMPLIANCE OF DWAF'S LEGISLATION, MANDATE AND FUNCTIONS WITH NEMA'S SECTION 2 PRINCIPLES

5.1 NEMA REQUIREMENTS

This Chapter will address the NEMA requirements relating to compliance, i.e. DWAF's compliance with the NEMA section 2 principles, and other national norms and standards pertaining to environmental management and protection. NEMA stipulates that compliance be described in terms of the following:-

- the process DWAF will follow to ensure that its own policies and implementation strategies will comply with the NEMA principles and how DWAF will ensure that its functions are implemented to ensure compliance;
- the priorities for compliance with DWAF's policies and legislation by other organs of state and stakeholders; and
- DWAF's strategies to ensure and measure compliance with its policies by other organs of state and stakeholders.

5.1.1 DWAF'S COMPLIANCE AND PERFORMANCE REGARDING NEMA REQUIREMENTS

The following stages of compliance should eventually be addressed through the EIMP process - DWAF can at this stage only show one and in certain cases two:

- an undertaking through policy and legislation (First Edition EIMP);
- inclusion in strategies;
- inclusion in plans, programmes and activities; and
- monitoring and auditing systems regarding application and implementation of the foregoing and the success thereof.

Table 2 below summarises the links between DWAF's policy principles and that of the NEMA principles with examples illustrating the most apparent correlation. The next step will be to, *via* initiatives such as the Environmental Management Framework process (refer Chapter 6), address other environmental laws, norms and standards.

Compliance with the NEMA principles was assessed in terms of DWAF's mandate, policy and legislative framework. It could however, for the purpose of this document not be meaningfully quantified in terms of DWAF's detailed activities and programmes, due to the fact that the Department is in the process of restructuring and thus, reviewing its functions and activities (refer 1.1).

The DWAF Environmental Management Framework process (*vide* Chapter 6) will be one of the initiatives through which compliance will be evaluated from a strategic level down to plan, programme and activity/project level. The following initiatives are also of relevance for the water services and forestry components regarding compliance:

Water services:

- The development of WSDPs models and pro formas – these plans aim to ensure *inter alia*:
 - effective business planning for Local Government;
 - *the promotion of integrated environmental management*;
 - action and commitment undertaking or performance contract dealing with sustainability at Local Government level and is a measure to ensure that functions will be executed; and
 - monitoring and auditing to evaluate performance and compliance to DWAF's standards and regulations,
- the process of compiling Feasibility Guidelines also reflects promotion of integrated environmental management and the NEMA principles; and
- development and implementation of monitoring and intervention systems further indicate compliance to NEMA principles since it addresses *inter alia* training, environmental standards, partnerships etc.

Forestry:

- Compliance with environmental laws, norms and standards, in addition to NEMA, is addressed in the NFAP. Furthermore, and as previously noted, the NFAP describes specific strategies to implement the

functions and responsibilities in respect of the South African forestry sector. Each strategy is detailed in terms of specific goals, indicators of achievement and tasks with responsibilities, timing and risks.

The table to follow on page 46 illustrates that in terms of DWAF's, vision and mission and on a strategic level, DWAF complies with the NEMA principles and that there is essential consonance between water and forestry policy and legislation and the environmental principles as set out in NEMA.

What remains, however, is for DWAF to further evaluate (via a continued process of developing and improving the Departmental EIMP and the promotion of integrated environmental management, refer Chapter 6) in more detail, the Departments' compliance in terms of its activities, programmes and plans to these principles. And in addition, to indicate how DWAF's functions, activities, policies and implementation strategies can and should be further realigned with these principles, and to ensure the application and implementation thereof.

The measuring of the Department's environmental performance in respect of the above can also only be achieved once suitable sustainability indicators, monitoring and auditing protocol, for comprehensive assessment have been developed (refer Annexure I).

Again, the Environmental Management Framework process (refer Chapter 6) will be addressing performance auditing and monitoring systems.

Furthermore, reporting in respect of existing processes will be employed to assist the Department in this regard, in particular reporting regarding implementation of the Strategic Plan – via the requirements related to the PFMA as well as DWAF's Annual Report initiative. The Annual Report comprises a report on DWAF's successes, or otherwise, in achieving the objectives set on an annual basis relating to Business Plans (and the Strategic Plan).

It is thus important to note that performance monitoring is addressed through current initiatives and processes. DWAF can not initiate a parallel process for the EIMP at this point in time – DWAF will in the coming year ensure co-ordination with existing initiatives to provide appropriate and more detailed information as regards DWAF's performance in respect of its functions, plans, programmes and detailed activities.

Further to the above, the following mechanisms are of significance:

For the **water resource management** component performance can be evaluated through:

- monitoring associated with the National Information System; and
- the Monitoring and Control System that has been developed to monitor the implementation of the TINWA programme.

Monitoring and auditing associated with the National Information System is also relevant for the **water services** component as is the M&E system and Monitoring System for WSDPs.

There is also currently an initiative underway to develop a monitoring and auditing system that will address changes in trends relating to **forestry** – in particular the state of forests. In addition, DWAF is busy preparing a National State of the Forest Report. This report will be prepared every three years.

DWAF's compliance with environmental principles is further supported by the Auditor-General review of DWAF's water policy and legislation. It was found via a formal audit completed for the water component of DWAF's mandate, that the former is in line with Agenda 21 and thus also the sustainability principles of NEMA.

In terms of section 188(1) of the Constitution, the Auditor-General must report on the accounts, financial statements, and *financial management* of all National State Departments and any other relevant institutions. In addition, the Auditor General has initiated a process of auditing the *environmental management performance* of Government Departments as regards to the implementation of their constitutional mandates and conformance to international conventions.

DWAF's water functional areas were audited against Chapter 18 of Agenda 21 during 2000. Due to the world-wide importance of freshwater natural resources in the alleviation of poverty, preference was given to

the implementation of draft international environmental audit guidelines in this field. The results of this audit were published in the Interim Report of the Auditor-General¹¹.

In conclusion, the Department is thus still in a position to do more to implement the compliance requirements of NEMA even if the intent is incorporated in policy, legislation and functions.

5.1.2 EXTERNAL COMPLIANCE TO DWAF LEGISLATION

In Chapter 3 an indication was given of the DWAF's environmental priority management functions. These functions indicate the priorities related to DWAF's policies and legislation (refer 3.1.2, 3.2.2 and 3.3.2) to which external institutions and stakeholders must comply.

The Department is, however, not at this stage in a position to meaningfully report on either the extent to which compliance is achieved, or on the details of how DWAF will ensure compliance. Implementation of DWAF's legislation is still in its infancy and monitoring and auditing strategies need to be further developed, tested and implemented. Progress on the development of methods to measure the extent of compliance will be monitored and reported in the annual updates of the EIMP.

Nevertheless, the water resources functional and organisational restructuring process has identified compliance auditing (internal and external) as one of the high level functions of water resource management. This will be implemented as part of the restructuring of DWAF.

In addition, the following mechanisms to ensure compliance to DWAF's legislation regarding the **water services** function, are at this stage being developed or implemented and include:

- The Water Services Act, e.g. where a requirement to comply with the NWA (water resource management) is included.
- The Integrated Policy Framework currently being developed for the water services sector. This framework will map out roles and responsibilities, and norms and standards.
- The Water Services Programme which is an integrated programme. It does, however, still needs to be put into practice. Roles, responsibilities, accountability, liabilities etc. have not yet been sorted out nor internalised.
- For the Framework and Programme there are steering committees that includes all stakeholders and role players – which highlights co-ownership and also advances compliance.
- Sub-policies including *inter alia*:
 - The Free Water Policy
 - Sanitation Policy
 - Transfer of Schemes Policy
 All these policies are deliberated with all stakeholders to ensure consultation, capacity building and alignment.
- There is also informal arrangements such as multi- and bilateral co-operation, e.g. the co-operation and working agreement with the DPLG.
- At a programme level an integrated approach is taken for basic services delivery. This is supported by the Integrated Sustainable Rural Development Programme – under the auspices of the DPLG.
- To ensure that projects are planned, implemented and run as sustainable businesses, Feasibility Guidelines are being developed to ensure among other that environmental principles are considered and implemented.
- Regulation of local government in terms of the WSDPs:
 - DWAF has taken a co-operative rather than a regulatory approach. DWAF provides guidelines and pro formas – it doesn't 'approve' WSDPs – only when Local Governments give their undertaking will DWAF monitor and audit them.
 - Other permits that might be applicable are water use licences (refer above) for schemes and EIAs in terms of other legislation – authorisation in respect of these activities falls outside the functions of the water services component.
 - Indirect mechanisms: the condition that State funding will be withheld if institutions do not comply with conditions as set by DWAF.
- An advance version of the WSDP pro forma/model is being developed for local government. It will serve *inter alia* as a knowledge base, assist with strategic planning and implementation, state actions

¹¹ Auditor-General. Interim Report of the Auditor-General on a Transversal Environmental Audit of Certain Aspects of Freshwater Resources and Water Services. RP181/2000. ISBN 0-621-30302-X.

and commitments and address reporting. Local Authorities will start reporting on their WSDPs to DWAF during 2002. The WSDPs are not finite processes – it will be continuously improved.

- The capacity building programme for WSAs is also a mechanism to ensure compliance – cultural change and internalisation will ensure sustainable compliance to NEMA principles, DWAF and other environmental legislation.
- Regulations, standards and norms have been drafted, addressing national tariffs, water quality aspects etc.
- A programme to ensure that Local Government promulgates appropriate by-laws.
- DWAF has initiated the development of a macro M&E system that will address among other compliance by Local Government, strategic monitoring, performance, research, capacity monitoring etc.
- There is also a project level M&E system and on a regional level an integrated M&E developed by the Departments of Education and Health.
- DWAF is also developing an audit system for auditing Business Plans of Water Boards, Local Government etc. that will include environmental questions.
- Development and implementation of Integrated Water Services Strategies focussed at rural development.

What became clear during these processes is that to ensure compliance:-

- there must be a common understanding of the problems;
- a common approach to solutions;
- programmes, action plans and monitoring systems must be developed and established;
- all reporting must be done in an objective, realistic manner; and
- compliance will only be achieved via progressive implementation and changing the 'culture' of organisations and officials.

Table 2: Assessing DWAF's compliance with the NEMA Principles

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<i>National Environmental Management Act, No 107 of 1998 (NEMA), section 2(2).</i>	<i>"Environmental Management must place people and their needs at the forefront of its concern, and serve their physical, psychological developmental, cultural and social interest equitably."</i>
National Water Act, No. 36 of 1998 (NWA), s2	<p>A. Water Resources Management</p> <p>(i) The purpose of the NWA is to ensure that the Nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors:-</p> <ul style="list-style-type: none"> - Meeting with the basic human needs of present and future generations; - Promoting the equitable access to water; - Redressing the result of past racial and gender discriminations; and - Promoting the efficient, sustainable and beneficial use of water in the public interest. <p>(ii) As the public trustee of the nation's water resources the National Government, acting through the minister, must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its constitutional mandate.</p> <p>B. Water Services</p> <p>(i) Equitable regional allocation of development resources. The limited national resources available to support the promotion of efficient, sustainable water services should be equitably distributed throughout the country according to population and level of development.</p> <p>(ii) The right of access to basic water supply and the right to basic sanitation necessary to secure sufficient water and an environmentally not harmful to human health or well-being.</p> <p>C. Forestry</p> <p>(i) Promote equitable access to the opportunities and benefits arising from industrial forestry arrangements, or facilitating land reform.</p> <p>(ii) Establish districts within which new afforestation would be beneficial, as well as the land-use planning and farming systems best suited to the needs of</p>
NWA, s3.	
National Sanitation Policy (NSP), Policy Principle 4.	
Water Services Act, No. 108 of 1997 (WSAct), s2(a); s3(1), (2).	
White Paper for Sustainable Forest Development in South Africa (WPSFD), the Policy for Industrial Forestry.	

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>WPSFD, the Policy for Community Forest.</p> <p>South Africa's National Forestry Action Programme (NFAP), Guiding Principles.</p> <p>NFA, s1(e) NFA, s1(f)</p> <p>NFA, s3(3)(c)(ii)</p>	<p>the local people and ways of assuring the supply of wood to capital intensive processing plants.</p> <p>(iii) Government recognises that community forestry can contribute to improving the environment, enriching resources, and creating income opportunities in previously disadvantaged communities in rural, peri-urban and urban environments.</p> <p>(iv) The necessity to ensure the most beneficial use of resources, balancing the public interest and private interest, national and local priorities, and the interest of today's generation without prejudice to tomorrow's.</p> <p>(v) NFAP is designed to satisfy national, provincial and local needs while meeting international obligations, e.g. in terms of Agenda 21.</p> <p>(vi) Promote community forestry.</p> <p>(vii) Promote greater participation in all aspects of forestry and the forests products industry by persons disadvantaged by unfair discrimination.</p> <p>(viii) Forests must be developed and managed so as to sustain the potential yield of their economic, social and environmental benefits.</p> <p>(ix) Forests must be developed and managed so as to promote the fair distribution of their economic, social, health and environmental benefits.</p>
<i>NEMA, s2(3).</i>	<i>"Development must be socially, environmentally and economically sustainable."</i>
<p>National Water Policy (NWP) Water Law Principle 7.</p> <p>NWP, Water Law Principle 17.</p> <p>NWA, s3(2).</p> <p>NWA, s110(1)(a).</p> <p>NWP, Water Law Principle 25.</p> <p>Water Supply and Sanitation Policy (WSSP) Policy Principle 8. WSSP Policy Principles 5.</p> <p>WSSP Policy Principle 6.</p> <p>WSAct, s2(c).</p> <p>WSAct, s2(j).</p> <p>NFAP.</p> <p>WPSFD, The Policy for Industrial Forestry.</p>	<p>A. Water Resources</p> <p>(i) The objective of managing the quantity, quality and reliability of the Nation's water resources is to achieve optimum, long term, environmentally sustainable social and economic benefit for society from their use.</p> <p>(ii) Water resource development and supply activities shall be managed in manner which is consistent with the broader national approaches to environmental management.</p> <p>(iii) ...the Minister is ultimately responsible to ensure that water is allocated equitably and used beneficially in the public interest, while promoting environmental values.</p> <p>(iv) Before constructing a waterwork, the minister must prepare an environmental impact assessment relating to the proposed waterwork which must, where the minister consider it appropriate, comply to regulations made under section 26 of the Environmental Conservation Act, 1989 (Act No. 73 of 1989).</p> <p>B. Water Services</p> <p>(i) The right of all citizens to have access to efficient, sustainable water services (the provision of potable water supply and the removal and disposal of human excreta and waste water) necessary to afford them a healthy environment on an equitable and economically and environmentally sustainable basis shall be supported.</p> <p>(ii) Environmental integrity is necessary to ensure that the environment is considered and protected in all development activities.</p> <p>(iii) Water has economic value. The way in which water and sanitation services are provided must reflect the growing scarcity of good quality water in South Africa in a manner which reflects their value and does not undermine long-term sustainability and economic growth.</p> <p>(iv) The user pays. This is a central principle to ensure sustainable and equitable development, as well as effective and efficient management.</p> <p>(v) The preparation and adoption of water services development plans by water services authorities.</p> <p>(vi) The promotion of effective water resource management and conservation.</p> <p>C. Forestry</p> <p>(i) NFAP is integrated with other Government policies and strategies, particularly rural and industrial development and the development of other relevant sectors.</p> <p>(ii) Sustainable forest development.</p> <p>(iii) Promote an industrial policy that will continually improve value-addition to forest products within S.A.</p> <p>(iv) Ensure that afforestation permit allocations and integrated catchment management will be directed at equitable, efficient and sustainable allocation of resources, linked with local economic development and resource use plans.</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>WPSFD, The Policy for Community Forestry.</p> <p>WPSFD, Conserving natural forests.</p> <p>NFA, Chapter 2</p>	<p>(v) Provide an orderly way for the forest industry to develop and to conduct its business responsibility and profitably.</p> <p>(vi) Government recognises that natural forests play a vital role in the household economies of many of these communities. The benefits arising from the sustainable management of these resources should accrue to local communities. Community forestry will have as a principal element the community driven conservation and management of these resources on land owned by the community.</p> <p>(vii) Emphasis on the development and application of community based methods of managing natural forests and sharing the benefits obtained, where appropriate.</p> <p>(viii) Sustainable forest management.</p>
<p>NEMA, s2(4)(a)(i).</p>	<p><i>"Sustainable development requires the consideration of all relevant factors including the following:</i></p> <p><i>(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;..."</i></p>
<p>NWP, Water Law Principle 9.</p> <p>NWA; Chapter 3, Part 1, 2 and 3.</p> <p>WSAct, s2(j).</p> <p>WSSP, Policy Principle 8.</p> <p>NSP, Policy Principle.</p> <p>NFA, s(1)(a)</p> <p>NFA, s(1)(c)</p> <p>NFA, s1(d)</p> <p>NFA, Chapter 2.</p> <p>NFA, Chapter 3.</p> <p>NVFFA, Chapter 4.</p> <p>NFAP.</p> <p>WPSFD, the Policy for Industrial Forestry.</p> <p>WPSFD, Conserving natural forests.</p>	<p>A. Water Resources Management</p> <p>(i) Quantity, quality and reliability of water required to maintain the ecological functions on which humans depend shall be reserved so that the human use of water does not individually or cumulatively compromise the long term sustainability of aquatic and associated ecosystems.</p> <p>(ii) Protection of water resources.</p> <p>B. Water Services</p> <p>(i) Water Services Goal: Providing for a healthy environment.</p> <p>(ii) Promotion of effective water resource management and conservation.</p> <p>(iii) Environmental integrity. It is necessary to ensure that the environment is considered and protected in all development activities.</p> <p>(iv) Environmental integrity. The environment must be considered in all development activities. Appropriate protection of the environment must be applied, including if necessary prosecution under the law. Sanitation services that have unacceptable impacts on the environment cannot be considered to be adequate.</p> <p>C. Forestry</p> <p>(i) Promote the sustainable management and development of forests for the benefit of all.</p> <p>(ii) Provide special measures for the protection of certain forests and trees.</p> <p>(iii) Promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes.</p> <p>(iv) Sustainable forest management.</p> <p>(v) Special measures to protect forests and trees.</p> <p>(vi) Veld fire prevention through firebreaks.</p> <p>(vii) The necessity to take account of other policies affecting the forest sector and to incorporate the forest policy of those measures that would ensure a positive relationship with other policies.</p> <p>(viii) Ensure that the forest sector is fully integrated with wider resource management strategies, emphasising links with land-use planning and integrated catchment management.</p> <p>(ix) Publish an annual review of the state of the forestry sector to ensure wide dissemination of information on the economic, social and environmental state of the sector.</p> <p>(x) The white paper recognises the special value which the people of South Africa place on natural forest and associated habitats, and our obligation to the global community to adequately protect the forests and biodiversity of the world. It recognises, further, the role which protecting and rehabilitating the woodlands must play in halting and reversing desertification of our country.</p>
<p>NEMA, s2(4)(a)(ii)</p>	<p><i>"Sustainable development requires the consideration of all relevant factors including the following:..."</i></p> <p><i>(ii) That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;..."</i></p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>NWP, Water Law Principle 16.</p> <p>NWA, Chapter 3, Part 5. NWA, s19 and 20.</p> <p>NWA, Chapter 4, s21. NWA, Chapter 4.</p> <p>WSSP, Policy Principle 8. NSP, Policy Principle 8.</p> <p>WSAct, S 7(1), (2), (3) and (4).</p> <p>WPSFD, The Policy for Industrial forestry.</p> <p>WPSFD, Conserving natural forests.</p> <p>NFA, Chapter 2</p>	<p>A. Water Resources Management</p> <p>(i) Water quality management option shall include the use of economic incentives and penalties to reduce pollution and the possibility of irretrievable environmental degradation as a result of pollution shall be prevented.</p> <p>(ii) Protection of water resources.</p> <p>(iii) Pollution prevention.</p> <p>(iv) Control of emergency incidents.</p> <p>(v) Protection of water resources.</p> <p>(vi) Use of water.</p> <p>B. Water Services</p> <p>(i) Preventing pollution and degradation are part of business plans and planning processes (i.e. proper infrastructure minimises impacts)</p> <p>(ii) Environmental Integrity. It's necessary to ensure that the environment is considered and protected in all development activities. Sanitation services which have unacceptable impacts on the environment cannot be considered to be adequate.</p> <p>(iii) Industrial use of water.</p> <p>C. Forestry</p> <p>(i) Address all options to increase timber yields and improve efficiency through research, technology and managerial innovation, recycling and waste minimisation, and development of alternative fibre sources..</p> <p>(ii) Stewardship of forests on land outside state forests are in the hands of conservation agencies, communities, and the private sector. The Government will promote the sustainable use and management of these forest and woodland resources, rehabilitation of degraded forests, and protection of forests under threat.</p> <p>(iii) Sustainable forest management</p>
<p><i>NEMA, s2(4)(a)(iii)</i></p>	<p><i>"Sustainable development requires the consideration of all relevant factors including the following:...</i></p> <p><i>(iii) That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;..."</i></p>
<p>NWP, Water Law Principle 18.</p> <p>NWA, Chapter 11.</p> <p>NFA, s(1)(d)</p> <p>NFA, s3(3)(c)(vi)</p> <p>NFA, s4(6)(a)(vi)</p> <p>NFA, s19. WPSFD.</p>	<p>A. Water Resources Management</p> <p>(i) Since land users have a significant impact upon the water cycle, the regulation of land use shall, where appropriate, be used as an instrument to manage water resources within the broader integrated framework of land use management.</p> <p>(ii) Government waterworks.</p> <p>(ii) Consultation and environmental impact assessment.</p> <p>(iv) Regulations regarding Government waterworks.</p> <p>B. Water Services</p> <p>(i) Addressed via feasibility studies, EIA part of project selection, management and WSDPs.</p> <p>C. Forestry</p> <p>(i) Promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes.</p> <p>(ii) Forests must be developed and managed so as to conserve heritage resources and promote aesthetic, cultural and spiritual values</p> <p>(iii) Criteria and indicators may include, but are not limited to, those for determining the level of maintenance and development of the social functions of forests.</p> <p>(iv) Use of Forests. Access for recreation, education, culture or spiritual fulfilment.</p> <p>(v) Government will ensure the protection of biodiversity, habitats sites of historical and cultural value, and scenery.</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<i>NEMA, s2(4)(a)(iv)</i>	<i>"Sustainable development requires the consideration of all relevant factors including the following:...</i> <i>(iv) That waste is avoided or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;..."</i>
NWA, s21 and 22 NWP, Water Law Principle 25. WSAct, s7. WPSFD, The Policy for Industrial forestry.	A. Water Resources Management (i) Use of water. B. Water Services (i) Waste management is addressed via WSDPs. (ii) The right of all citizens to have access to efficient and sustainable water services (the provision of potable water supply and the removal and disposal of human excreta and waste water) necessary to afford them a healthy environment on an equitable and economically and environmentally basis shall be supported. (iii) Industrial use of water. C. Forestry (i) Address all options to increase timber yields and improve efficiency through research, technological and managerial innovation, recycling and waste minimisation, and development of alternative fibre sources.
<i>NEMA, s2(4)(a)(v)</i>	<i>"Sustainable development requires the consideration of all relevant factors including the following:...</i> <i>(vi) That the use and exploitation of nonrenewable resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;..."</i>
N/A	N/A
<i>NEMA, s2(4)(a)(vi)</i>	<i>"Sustainable development requires the consideration of all relevant factors including the following:...</i> <i>(vi) That the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;..."</i>
NWA, Chapter 3. NWP, Water Law Principle 9. NWP, Water Law Principle 14. NWP, Water Law Principle 27. WSAct, s2(c). WSAct, s2, 4, 9. WSSP, Policy Principle 4.	A. Water Resources Management (i) Protection of water resources. (ii) Classification system for water sources. (iii) Classification of water resources and resources quality objectives. (iv) The Reserve. (vi) The quantity, quality and reliability of water required to maintain the ecological functions on which human use of water does not individually or cumulatively compromise the long term sustainability of aquatic and associated ecosystems. (vii) Water resources shall be developed, apportioned and managed in such a manner as to enable all user sectors to gain equitable access to the desired quantity, quality and reliability of water to manage demand shall be actively promoted as a preferred option to achieve these objectives. B. Water Services (i) Addressed via WSDPs, project selection and feasibility studies. (ii) Where provision of water services is an activity distinct from the development and management of water resources, water services shall be provided in a manner consistent with the goals of water resource management. (iii) The preparation and adoption of water services development plans by water services authorities. (iv) The promotion of effective and sustainable use of water resources for water services. (v) Equitable regional allocation and development of resources. The limited national resources available to support the provision of basic services should be equitably distributed throughout the country, according to population and

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>NFA, Chapter 2 NFA, Chapter 4.</p> <p>NFAP.</p> <p>WPSFD, The Policy for Industrial forestry.</p>	<p>level of development.</p> <p>C. Forestry</p> <p>(i) Sustainable forest management. (ii) Use of forests. This chapter regulates a wide range of uses of primarily State forests, ranging from recreational use to commercial and community forestry. (iii) The necessity to ensure the most beneficial use of resources, balancing the public interest and private interest, national and local priorities, and the interests of today's generation without prejudice to tomorrow's. (iv) ... and limit adverse effect of industrial forestry on water resources and biodiversity.</p>
<p><i>NEMA, s2(4)(a)(vii)</i></p>	<p><i>"Sustainable development requires the consideration of all relevant factors including the following:...</i> <i>(vii) That a risk adverse and cautious approach is applied, which take into account the limits of current knowledge about the consequences of decision and actions;..."</i></p>
<p>NWA, Chapter 4.</p> <p>NWA, Chapter 2.</p> <p>NWP, Water Law Principle 21.</p> <p>NWA, s144 and 145.</p> <p>NWP, Water Law Principle 27.</p> <p>WSAct, s2(h).</p> <p>NFA, s1(c) NFA, s3(3)(a)</p> <p>NFA, s3(3)(b) NVFFA, s9 and 10. NVFFA, Chapter 4. NFA., Chapter 3 WPSFD, the Policy for Industrial Forestry.</p> <p>WPSFD, Conserving natural forest.</p>	<p>A. Water Resources Management</p> <p>(i) Use of water. (ii) General principles. (iii) Considerations, conditions and essential requirements of general authorisations and licences. (iv) Existing lawful water uses. (v) Stream flow reduction activities. (vi) Controlled activities. (vii) Water Management Strategies. (viii) National Water Management Strategy. (ix) Catchment Management Strategy. (x) The development and management of water resources shall be carried out in a manner which limits to an acceptable minimum the danger to people and property due to natural or manmade disasters. (xi) Monitoring, assessments and information: Information on floodlines, floods and droughts.</p> <p>B. Water Services</p> <p>(i) Standards, norms and regulations. (ii) Water services shall be regulated in a manner which is consistent with and supportive of the aims and approaches of the broader Local Government framework. (iii) The gathering of information in a national information system and the distribution of that information.</p> <p>C. Forestry</p> <p>(i) Provide special measures for the protection of certain forests and trees. (ii) Natural forests must not be destroyed save in exceptional circumstances where, in the opinion of the Minister, a proposed new land use is preferable in terms of its economic, social or environmental benefits. (iii) A minimum area of each woodland type should be conserved. (iv) Fire danger rating. (v) Veldfire prevention through firebreaks. (vi) Special measure to protect forests and trees. (vii) Continually monitor and assess forest health and factor affecting it (pests, diseases, fire, effects of plantation forestry on soils, impacts of atmospheric pollution, conservation of adequate gene pools) as a basis of strategic responses to any potential threats to sustainability. (viii) Where the Department identifies areas under stress, it will investigate and promote rural development initiatives to provide people with alternative opportunities to satisfy their needs.</p>
<p><i>NEMA, s2(4)(a)(viii)</i></p>	<p><i>"Sustainable development requires the consideration of all relevant factors including the following:...</i> <i>(viii) That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented,</i></p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
	<i>are minimised and remedied."</i>
<p>NWA, s19. NWA, s20. NWA, Chapter 4.</p> <p>WSAct, s2. WSAct, s7. WSAct, s5.</p> <p>NFA, Chapter 3, S 7. NFA, s8, 9, 10 and 11. NFA, s12, 13, 14, 15 and 16. NFA, s17. NVFFA, Chapter 3. NVFFA, Chapter 4. NVFFA, Chapter 5. WPSFD, Policy for Industrial Forestry.</p> <p>WPSFD, Conserving natural forests.</p>	<p>A. Water Resources Management</p> <p>(i) Prevention and remedying affects of pollution. (ii) Control of emergency incidents. (iii) Water use.</p> <p>B. Water Services</p> <p>(i) The right of access to basic water supply and sanitation, sufficient water and an environment not harmful to human health or well-being. (ii) Industrial use of water. (iii) Provision of basic water supply and basic sanitation to have preference.</p> <p>C. Forestry</p> <p>(i) Prohibition on destruction of trees in natural forests. (ii) Protected areas. (iii) Protection of trees. (iv) Measures to control and remedy deforestation. (v) Fire danger rating. (vi) Veldfire prevention through fire breaks. (vii) Fire fighting. (viii) Counter and limit adverse effects of industrial forestry on water resources and biodiversity. (ix) Continually monitor and assess forest health and factors affecting it (pests, diseases, fire, effects of plantation forestry on soils, impacts of atmospheric pollution, conservation of adequate gene pools) as a basis of strategic responses to any potential threats to sustainability. (x) Promoting the sustainable use and management of natural forests and woodland resources, rehabilitation of degraded forests, and protection of forests under threat.</p>
<i>NEMA, s2(4)(b)</i>	<i>"Environmental Management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option."</i>
<p>NWP, Water Law Principle 15.</p> <p>NWP, Water Law Principle 17.</p> <p>NWP, Water Law Principle 18.</p> <p>NWA, Chapter 3. NWA, Chapter 4. NWA, s110.</p> <p>NSP, WSSP</p> <p>NSP, WSSP</p> <p>NWP, Water Law Principle 27.</p>	<p>A. Water Resources Management</p> <p>(i) Water quality and quantity are interdependent and shall be managed in an integrated manner, which is consisted with broader environmental management approaches. (ii) Water resources development and supply activities shall be managed in a manner which is consistent with the broader national approaches to environmental management. (iii) Since many land users have a significant impact upon the water cycle, the regulation of land used as an instrument to manage water resources within the broader integrated frame work of land use management. (iv) Protection of water resources. (v) Use of water. (vi) Consultation and environmental impact assessment for construction of Government waterworks.</p> <p>B. Water Services</p> <p>(i) Integrated development. Water and Sanitation development are not possible in isolation from development in other sectors. Co-ordination is necessary with all tiers of Government and other involved parties and maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy. (ii) Environmental integrity. It is necessary to ensure that the environment is considered and protected in all development activities. (iii) While the provision of water services is an activity distinct from the development and management of water resources, water services shall be provided in a manner consistent with the goals of water resource management.</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
WSAct, s2(j). WSAct, s9(i) and (c). NFA, s3	(iv) The promotion of effective water resources management and conservation. The promotion of IEM is incorporated in the Water Services Act as well as the guidelines and manuals (relating to e.g. WSPDs) developed by the Department. It also forms part of the water services provisioning and regulatory framework and is established as a principle in the mission goals as well as the Water Services culture. (v) The effective and sustainable use of water resources for water services. (v) Also addressed via WSPDs, project selection, feasibility studies and the business approach to water services provision (not just a matter of infrastructure provision). C. Forestry (i) Principles to guide decisions affecting forests.
<i>NEMA, s2(4)(c)</i>	<i>"Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged person."</i>
NWP, Water Law Principle 8. NWP, Water Law Principle 9. NWA, Chapter 3. NWA, s19. NWA, Chapter 16. NSP and WSSP. WSAct, s3. WSAct, s5. NFA, s3(3)(c)(iii) NFA, s3(3)(c)(vii) WPSFD.	A. Water Resources Management (i) The water required to ensure that all people have access to sufficient water shall be reserved. (ii) The quantity, quality and reliability of water required to maintain the ecological functions on which humans depends shall be reserved so that the human use of water does not individually or cumulatively compromise the long-term sustainability of aquatic and associated ecosystems. (iii) Determination of the Reserve for basic human needs. The basic human needs reserve provide for the essential needs of individuals served by the water resource in question and includes water for drinking, for food preparation and for personal hygiene. (iv) Prevention and remedying effects of pollution. (v) Offences and remedies. B. Water Services (i) Basic services are a human right. In fulfilment of its obligation, Government must create an enabling environment through which all South Africans can access services and the support in obtaining those services, but in the end it is individuals who are responsible. (ii) Right of access to water supply and sanitation. (iii) Provision of basic water supply and basic sanitation to have preference (free water concept) C. Forestry (i) Forests must be developed and managed so as to promote the fair distribution of their economic, social, health and environmental benefits. (ii) Forests must be developed and managed so as to advance persons or categories of persons disadvantaged by unfair discrimination. (iii) Forestation and forest resources to be treated as a national asset.
<i>NEMA, s2(4)(d)</i>	<i>"Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special access thereto by categories of persons disadvantaged by unfair discrimination."</i>
NWP, Water Law Principle 8. NWA, s16. WSSP and NSP Policy Principles.	A. Water Resources Management (i) The water required to ensure that all people have access to sufficient water shall be reserved. (ii) Determination of the basic human needs reserve. B. Water Services (This principle, in addition to S 2(s) of NEMA mirrors the core focus and purpose of DWAF Water Services.) (i) Equitable regional allocation of development resources.

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
WSAct, s3. NFA, s1(f) NFA, s3(3)(c)(iii) NFA, s3(3)(c)(vii) NFA, Chapter 4. WPSFD.	(ii) Right of access to basic water supply and basic sanitation. C. Forestry (i) Promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination. (ii) Forests must be developed and managed so as to promote the fair distribution of their economic, social, health and environmental benefits. (iii) Forests must be developed and managed so as to advance persons or categories of persons disadvantaged by unfair discrimination. (iv) Use of primarily State forest, ranging from recreational use to commercial and community forestry. (v) Promote equitable access to the opportunities and benefits arising from industrial forestry arrangements, or facilitating land reform.
NEMA, s2(4)(e)	<i>"Responsibility for the environmental health and safety consequences of a policy programme, project, product, process, service or activity exists throughout its cycle."</i>
NWA, Chapter 12. NWP, Water Law Principle 16. NWA, s19. NWP, Water Law Principle 25. WSAct, s7. WSAct, s3. NSP. NFA, s3(3) NFA, s4(6)(a)(iii) NFA, s4(6)(a)(v) WPSFD, The Policy for Industrial Forestry	A. Water Resources Management (i) Safety of new and existing dams. (ii) Water quality management options shall include the use of economic incentives and penalties to reduce pollution and the possibility of irretrievable degradation as a result of pollution, shall be prevented. (iii) Prevention and remedying effects of pollution. B. Water Services (i) Water Services Project Management Programme (geared towards better management). (ii) The right of all citizens to have access to effective and sustainable water services (the provision of potable water supply and the removal and disposal of human excreta and waste water) necessary to afford them a healthy environment on a equitable and economically and environmentally sustainable basis, shall be supported. (iii) Industrial use of water. (iv) Right of access to basic water supply and sanitation. (v) Sanitation is about health. C. Forestry (i) The principles are that forests must be developed and managed so as to conserve biological diversity, ecosystems and habitats; sustain the potential yield of their economic, social and environmental benefits; promote the fair distribution of their economic, social, health and environmental benefits; and promote their health and vitality; (ii) Criteria and indicators may include, but are not limited to, those for determining the level of maintenance and development of the health and vitality of forests. (iii) Criteria and indicators may include, but are not limited to, those for determining the level of maintenance and development of the protective and environmental functions of forests. (iv) Continually monitor and assess forest health and factors affecting it. (v) Facilitate the ongoing process of developing criteria and indicators that can be applied to promote the sustainability of industrial resource and for the certification of forest management units and forest products.
NEMA, s2(4)(f)	<i>"The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation by vulnerable and disadvantaged persons must be ensured."</i>
NWP, Water Law Principle 23. NWA, s2.	A. Water Resources Management (i) Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable interested parties to participate.

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>NSP Policy Principles.</p> <p>NFA, s1(e) NFA, s1(f)</p> <p>NFA, s3(3)(c)(iii)</p> <p>NFA, s3(3)(c)(vii)</p> <p>NFA, s29, 30, 31 and 32.</p> <p>NFA, s34 NFA, s36 WPSFD.</p>	<p>(ii) Establish sustainable institutions and ensure that they have appropriate community, racial and gender representation.</p> <p>B. Water Services</p> <p>(i) Achieved via integrated project selection. (ii) Social focus of water services provision: public knowledge base and ownership. Achieved through empowerment, involvement in decision making, social responsibilities ('use pay' principles) (iii) Sanitation is a community responsibility.</p> <p>C. Forestry</p> <p>(i) Promote community forestry. (ii) Promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination. (iii) Forests must be developed and managed so as to promote the fair distribution of their economic, social, health and environmental benefits. (iv) Forests must be developed and managed so as to advance persons or categories of persons disadvantaged by unfair discrimination. (v) Allows communities that wish to engage in community forestry to enter into agreement with the minister. (vi) Constitution of the National Forestry Advisory Council (NFAC). (vii) Committees of the NFAC. (viii) People driven development.</p>
<p><i>NEMA, s2(4)(g)</i></p>	<p><i>"Decisions must take into account the interest, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge."</i></p>
<p>NWP, Water Law Principle 23.</p> <p>NWA, s3(2).</p> <p>NSP and WSSP Policy Principles. WSAct, s10(2)(a)(iii).</p> <p>WPSFD.</p> <p>NFA, s30.</p> <p>NFA, s34 NFA, s36</p>	<p>A. Water Resources Management</p> <p>(i) Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable interested parties to participate. (ii) The minister is ultimately responsible to ensure that water is allocated equitably and used beneficially in the public interest, while promoting environmental values.</p> <p>B. Water Services</p> <p>(i) Basic services are a human right. (ii) Norms and standards may differentiate on an equitable basis different geographical areas, taking into account, among other factors, the socio-economic and physical attributes of each area. (iii) Empowerment of communities (iv) Establishment and application of information systems</p> <p>C. Forestry</p> <p>(i) People driven development. (ii) Establish the district available where new afforestation would be more beneficial, as well as the land use and farming systems best suited to the needs of the local people, and ways of assuring the supply of wood to capital intensive processing plants. (iii) Conclusion of community forestry agreements. (iv) Content of community forestry agreements. (v) Constitution of the National Forestry Advisory Council (NFAC). (vi) Committees of the NFAC.</p>
<p><i>NEMA, s2(4)(h)</i></p>	<p><i>"Community well being and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means."</i></p>
	<p>A. Water Resources Management</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
NWA, s2.	(i) Facilitating social and economic development.
WSAct, s8.	B. Water Services (i) A water authority must consider the following factors, to the extent that the water services authority considers them to be relevant:- - the quality of - the reliability of; and - the socio-economic and consideration of benefits that may be achieved by providing the water services in question.
WSAct, s9.	(ii) In prescribing standards:- - the needs for everyone to have a reasonable quality of life; - the need for equitable access to water services; and - any impact which the water services ... have on the environment.
NSP.	(iii) Health and Hygiene education and promotion.
WPSFD.	C. Forestry (i) Consultation in formulating and implementing policy. (ii) Provide training and advice to small farmers, contractors and entrepreneurs in skills such as those needed to negotiate and manage contracts.
NFA, s3.	(iii) The development and application of community based method of managing natural forests and sharing the benefits in the forests of the former homelands, and wherever else local communities have the benefit of the resource.
NFA, s4(6)(a)(vi)	(iv) Forests must be developed and managed so as to sustain the potential yield of their economic, social and environmental benefits and advance persons or categories of persons disadvantaged by unfair discrimination.
NFA, s4(6)(b)	(v) Criteria and indicators may include those for determining the level of maintenance and development of the social functions of forests.
NFA, s36	(vi) Criteria and indicators may include those for determining the level of provision of socio-economic benefits.
NFA, s42(2)(h)	(vii) Committees of the National Forestry Advisory Council. (viii) The Minister, as trustee of the Committee on Forest Access, provides environmental education.
NEMA, s2(4)(i)	<i>"The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment."</i>
NWA, s11. NWA, Chapter 4.	A. Water Resources Management (i) Prevention and remedying effects of pollution. (ii) Principles for regulating water use is defined broadly, and includes taking water, storing water, activities which reduce stream flow, waste discharges and disposal, controlled activities (activities which impact detrimentally on a water resource), altering a watercourse, removing water found underground for certain purposes, and recreation. In general, water use must be licensed unless it is listed in Schedule 1, is an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a licence.
NWP, Water Law Principle 17.	(iii) Water resource development and supply activities shall be consistent with the broader national approaches to environmental management.
NSP and WSSP.	B. Water Services (i) Environment integrity. It is necessary to ensure that the environment is considered and protected in all development activities.
NSP.	(ii) Environmental impact.
NSP.	(iii) Financial and economic approach (business approach – schemes must be economical – sustainable services).
NSP.	(iv) Technical considerations.
WPSFD.	C. Forestry (i) Counter and limit adverse affects of industrial forest on water resources and biodiversity.
NFA, s3.	(ii) Principles guiding the decisions affecting forests.

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
NFA, s4	(iii) Promotion and enforcement of sustainable forest management.
NEMA, s2(4)(j)	<i>"The right of workers to refuse work that is harmful to human health or the environment and to be informed if dangers must be respected and protected."</i>
	This aspect is not clearly addressed in policy and legislation and will thus require further investigation.
NEMA, s2(4)(k)	<i>"Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law."</i>
NWP, Water Law Principle 23. NWA, Chapter 14. WSAct, Chapter X. WPSFD. NFA, s5 and 6.	<p>A. Water Resources Management</p> <p>(i) Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable interested parties to participate.</p> <p>(ii) Monitoring, assessment and information.</p> <p>B. Water Services</p> <p>(i) Integrated decision making.</p> <p>(ii) National information system.</p> <p>C. Forestry</p> <p>(i) Policy to be formulated and implemented so as to promote democratisation.</p> <p>(ii) Publish an annual review of the state of the forest sector to ensure wide dissemination of information on the economic, social and environmental state of the sector.</p> <p>(iii) Consult and negotiate with appropriate institutions such as the Rural Financial Services Commission to broaden access to industrial forestry.</p> <p>(iv) Research, monitoring and reporting.</p>
NEMA, s2(4)(l)	<i>"There must be inter-Governmental co-ordinator and harmonisation of policies, legislation actions relating to the environment."</i>
NWA, Chapter 2. NWA, Chapter 7 – 10. NWA, Chapter 4. NWA, s110. NWP, Water Law Principle 27. WSAct, s9 (3). WSAct, s12. WSAct, s13. WSAct, s15. WSAct, s18. WSAct, s34. WSAct, s62 and 63. WSAct, s39. WSSP and NSP. WSAct, s78. WPSFD.	<p>A. Water Resources Management</p> <p>(i) National water resource strategy.</p> <p>(ii) Catchment management strategy.</p> <p>(iii) Catchment management agencies, Water User Associations, Advisory Committees and International Water Management.</p> <p>(iv) Use of water.</p> <p>(v) Consultation and environmental impact assessment for Government waterworks.</p> <p>B. Water Services</p> <p>(i) Water services shall be regulated in a manner which is consistent with and supportive of the aims and procedures of the broader Local Government framework.</p> <p>(ii) In prescribing standards under s9 (i) of the WSA, the minister must consider any other Government authorities.</p> <p>(iii) Duty to prepare draft water services development plan.</p> <p>(iv) Contents of draft water services development plan (WSDP).</p> <p>(v) Adoption of water services development plan.</p> <p>(vi) Reporting on implementation of WSDP.</p> <p>(vii) Parameters for functions of water boards.</p> <p>(viii) Monitoring and intervention.</p> <p>(ix) Policy statement – water boards.</p> <p>(x) Water supply and sanitation.</p> <p>(xi) Compliance with other laws.</p> <p>(xii) Develop standards, norms and regulations.</p> <p>C. Forestry</p> <p>(i) Consultation in formulating and implementing policy.</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
<p>NFA, s3 NFA, s9. NFA, Chapter 4, part 2. NFA, Chapter 4, part 3. NFA, s47 NFA, s48 NFA, s49 and 50. NVFFA, s4 NVFFA, s11 NVFFA, s23</p>	<p>(ii) Co-operate with the Department of Environmental Affairs and Tourism to ensure that criteria and indicators for forest management adhere to international standards, yet are suited to local needs. (iii) Community forestry form part of the national forestry strategy, and must be coherent with rural development, energy provision, and other relevant policies for South Africa. It must also be integrated into local development plans. (iv) Assess the provisions of the Conservation of Agricultural Resources Act, No. 43 of 1983 to determine whether it is sufficient to regulate the removal of forests and improve it as necessary, and promote the implementation of these provisions. (v) Principles to guide decisions affecting forests. (vi) Procedures for declaring protected areas. (vii) Vesting and granting rights to use State forests. (viii) Community forestry. (ix) Assignment of powers and duties. (x) Delegation of powers and duties. (xi) Expropriation of property. (xii) Registration of fire protection associations. (xiii) Delegation of powers and duties. (xiv) Assignment of powers and duties.</p>
<p><i>NEMA, s2(4)(m)</i></p>	<p><i>"Actual or potential conflict of interest between organs of State should be resolved through conflict resolution procedures."</i></p>
<p>NWA, Chapter 15. NWP, Water Law Principle 22. NWA, s148(4). WSAct, s63. NFA, s45</p>	<p>A. Water Resources Management (i) Appeals and dispute resolution. (ii) The institutional framework for water management shall as far as possible be simple, pragmatic and understandable. It shall be self-driven and minimise the necessity for State intervention. Administrative decisions shall be subject to appeal. (iii) Establishment of a Water Tribunal. B. Water Services (i) Intervention. (ii) Addressed via WSDPs. (iii) Integrated approach, formal facilitation and involvement. C. Forestry (i) Establishment of a panel from which facilitators, mediators and arbitrators may be selected for purposes of dispute resolution.</p>
<p><i>NEMA, s2(4)(n)</i></p>	<p><i>"Global and international responsibilities relating to the environment must be discharged in the national interest."</i></p>
<p>NWP, Water Law Principle 11. NWP, Water Law Principle 12. NWA, Chapter 10. WPSFD.</p>	<p>A. Water Resources Management (i) International water resources, specifically shared river systems, shall be managed in a manner that optimises the benefits for all parties in a spirit of mutual co-operation. Allocations agreed for downstream countries shall be respected. (ii) The national Government is the custodian of the Nation's water resources, as an indivisible national asset. Guided by its duty to promote the trust, the National Government, has ultimate responsibility for, and authority over, water resource management, the equitable allocation and usage of water and the transfer of water between catchments and international water matters. (iii) International water management. B. Water Services (i) Via Local Agenda 21 and international liaison and participation. C. Forestry (i) Global concerns for sustainable forest development. (ii) Five documents produced at the United Nations Conference on</p>

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
	Environment and Development (UNCED) in Rio de Janeiro in June 1992, relevant to South African forestry:- <ul style="list-style-type: none"> - Forestry principles - Convention on biological diversity - Agenda 21 - Rio Declaration; and - Framework change.
<i>NEMA, s2(4)(o)</i>	<i>"The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage."</i>
NWP, Water Law Principle, 13. NWA, s3. NWP, Water Law Principle 28. WPSFD. NFA, s1.	A. Water Resources Management <ul style="list-style-type: none"> (i) As custodian of the Nation's water resources, the National Government shall ensure that the development, apportionment, management and use of these resources is carried out using the criteria of public interest, sustainability, equity and efficiency of use in a manner which effects its public trust obligations and the value of water to society, while ensuring that basic domestic needs the requirements of the environment and international obligations are met. (ii) Public trusteeship of nation's water resources. B. Water Services <ul style="list-style-type: none"> (i) Where water services are provided in a monopoly situation, the interest of the individual consumer and the wider public must be protected and the broad goals of public policy promoted. (ii) Through WSDPs: benefit of scale and environmental protection. (iii) Pro-active feasibility studies. (iv) Monitoring and information systems. C. Forestry <ul style="list-style-type: none"> (i) Forests and forest resources to be treated as a national asset. (ii) Promote the sustainable management and development of forests for the benefit of all.
<i>NEMA, s2(4)(p)</i>	<i>"The cost of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for those responsible for harming the environments."</i>
NWP, Water Policy Principle 16. NWA, s19. NWA, s20. NWA, Chapter 5. NWA, s53. NWP, Water Law Principle 25. NSP. WSAAct, s7. WSAAct, s8. WSAAct, s9. WSAAct, s21. WSAAct, s9. WSAAct, s10.	A. Water Resources Management <ul style="list-style-type: none"> (i) Water quality management options shall include the use of economic incentives and penalties to reduce pollution; and possibility of irretrievable environment degradation as a result of pollution shall be prevented. (ii) Prevention and remedying effects of pollution. (iii) Control of emergency incidents. (iv) Water use charges. (v) Rectification of contravention of licence conditions. B. Water Services <ul style="list-style-type: none"> (i) The right of all citizens to have access to basic water services (the provision of potable water supply and the removal and disposal of human excreta and waste water) necessary to afford them a healthy environment on an equitable and economically and environmentally sustainable basis shall be supported. (ii) Environmental integrity. (iii) Environmental impact. (iv) Technical considerations. (v) Industrial use of water. (vi) Approval and appeal. (v) By-laws. (vi) Standards. (viii) Norms and standards for tariffs. (ix) Monitoring performance of water services providers and water services

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
WSAct, s27. WSAct, s34. WSAct, Chapter X. WPSFD. NFA, s53(2) NFA, Chapter 7	intermediaries. (x) Parameters for functions for water boards. (xi) National information system. (xii) Through WSDPs and project selection. C. Forestry (i) Address all options to increase timber yields and improve efficiency through research, technological and managerial innovation, recycling and waste minimisation, and development of alternative fibre sources. (ii) The Minister may make regulations. (iii) Offences and penalties.
<i>NEMA, s2(4)(q)</i>	<i>"The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promised."</i>
NWA, s2. NWA, s81. NSP. WSAct, s10. WPSFD. NFA, s31. NFA, s34.	A. Water Resources Management (i) Redressing the results of past racial and gender discrimination. (ii) Appointment of governing board of catchment management agency. B. Water Services (i) Community issues and human development. (ii) Norms and standards for tariffs. (iii) Included as a RDP principle: all projects must meet the former. Also addressed via project selection and reporting systems. C. Forestry (i) Gender equity. (ii) Community Forestry Agreements. (iii) Constitution of National Forests Advisory Council.
<i>NEMA, s2(4)(r)</i>	<i>"Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems requires specific attention in management and planning procedures, especially when they are subject to significant human resources usage and development pressure."</i>
NWA, s2. NWA, Chapter 2. NWA, Chapter 3. NWA, Chapter 4. NWP, Water Law Principle 9. WSSP and NSP. WSAct, s9. WSAct, s11. WPSFD. NFA, s3(3)(c).	A. Water Resources Management (i) Protecting aquatic and associated ecosystems and their biological diversity. (ii) Water management strategies. (iii) Protection of water resources. (iv) Use of water. (v) The quantity, quality and reliability of water required to maintain the ecological functions on which humans depend shall be reserved so that the human use of water does not individually or cumulatively compromise the longterm sustainability of aquatic and associated ecosystems. B. Water Services (i) Environmental integrity. It is necessary to ensure that the environment is considered and protected in all development activities. (ii) National standards. (iii) Duty to promote access to water services. C. Forestry (i) Protection of biodiversity, habitats, soils and cultural assets in industrial forests, concurrent with other Acts. (ii) Forests must be developed and managed so as to:- - Conserve biological diversity, ecosystems and habitats; - Sustain the potential yield of their economic, social and environmental benefits; - Conserve natural resources, especially soil and water; and - Conserve heritage resources and promote aesthetic, cultural and spiritual

POLICY AND LEGISLATION REFERENCE	COMPLIANCE OF DWAF'S POLICY AND LEGISLATION WITH NEMA PRINCIPLES
NFA, Chapter 3	values. (iii) Special measures to protect forests and trees.

CHAPTER 6: PROMOTING INTEGRATED ENVIRONMENTAL MANAGEMENT

6.1 IMPLEMENTATION OF INTEGRATED ENVIRONMENTAL MANAGEMENT WITHIN DWAF

Prior to NEMA and the current environmental impact assessment regulations, DWAF has been applying elements of the Council for the Environment's integrated environmental management (IEM) process, during project development and implementation. DWAF formulated its own procedure for the practical application of IEM and published a manual for DWAF purposes. Later the Department amended this process to comply with the IEM Guideline Series of 1992, that was developed by the then Department of Environmental Affairs.

In the last decade, however, many environmental laws were revised and new legislation (in particular NEMA) promulgated in South Africa. In order to align DWAF's activities and functions with the principles and Chapter 5 (IEM) of NEMA and other relevant environmental legislation and to promote environmental compliance and performance in the Department, the DWAF IEM procedures will be revised. These are in the process of being redrafted, strengthened and customised to cater for DWAF requirements. In addition an Environmental Management Framework (EMF) will be developed and implemented.

This will entail *inter alia*:-

- revision and update of the current IEM procedures of DWAF by aligning and integrating the principles of IEM (set out in NEMA) within DWAF's engineering stages and the project life cycle approaches;
- aligning, integrating and developing, where necessary, environmental management tools and systems (e.g. EIAs, environmental management plans, environmental risk assessment, monitoring, auditing, social impact assessments, environmental management systems, etc.) with the foregoing;
- alignment between RDM activities and IEM procedures;
- identify and assign technical and environmental activities and deliverables to DWAF IEM procedures and project stages, which will serve as forcing measures to ensure compliance and performance;
- identify and assign environmental management roles and responsibilities to each project stage within the life cycle approach;
- revising and updating of a standardised Environmental Management Plan (EMP) for DWAF development projects and ensuring that the EMP and environmental specifications interact;
- revising and modifying standardised environmental specifications to include in all contract documents as part of the tender stage and which may lead to the signing of environmental contracts;
- developing and implementing sound environmental management procedures, systems, guidelines and manuals, and other appropriate and related instruments;
- compiling a strategic framework and guideline documents on IEM procedures and the application thereof for those DWAF activities leading to environmental impacts and the overall environmental management of DWAF's functions; and
- implementation of the EMF framework.

and will thus:-

- align and optimise environmental management processes required by the relevant legislation (i.e. NWA, NFA, Water Services Act, NEMA, ECA etc.);
- ensure that environmental considerations are efficiently and adequately taken into account during all stages of development and implementation processes within DWAF, which will assist to effectively perform Departmental environmental functions;
- ensure that activities and projects are compatible with environmental legislation, meets environmental requirements and thus ensure compliance;
- ensure that in-house and funded DWAF projects apply, and thus conform, to minimum environmental standards through the use of environmental procedures;
- ensure the further integration, development and implementation of environmental management tools and processes, thus promoting the National Environmental Management principles as set out in NEMA; and
- encourage integrated resource management, sustainable environmental development and utilisation, and sound environmental management practices within DWAF.

It is anticipated that the above process will be phased in during the next few (two to five) years and will comprise of the following phases:

- **phase 1** that will entail the revision of DWAF's current IEM procedures and development of an Environmental Management Framework at a strategic level, addressing the impacting activities and associated environmental management activities, deliverables and roles and responsibilities, etc., within DWAF functions;
- **phase 2**, following involvement of all stakeholders, the compilation of a guideline/manual for application of environmental management within DWAF, containing procedures and tools and the application thereof for those DWAF activities leading to environmental impacts and overall environmental management of DWAF functions;
- **phase 3**, the planning and roll out of an implementation strategy for the updated IEM procedure of DWAF and the Environmental Management Framework, which will include appropriate environmental management systems and related environmental performance monitoring and continual improvement tools;
- **phase 4**, running parallel with phase 3 and 5, the development, where necessary, of sound environmental management procedures, systems and related environmental performance monitoring, auditing and continual improvement tools; and
- **phase 5**, implementation of updated DWAF's IEM procedure and Environmental Management Framework within DWAF activities and functions at national and regional level in a phased manner.

A period of one year is envisaged for the completion of phases 1 – 3, commencing in July 2001, provided that sufficient funds are available for phases 2 and 3. Phase 4 could take between 6 to 8 months depending on the type and number of systems, tools and procedures still needed to be developed, where phase 5 will most probably be a phased approach pending availability of financial and capacity resources. Phase 5 is envisaged to take 2 - 3 years, taking in consideration continual improvement of the implementation process and environmental education programmes. The project should be completed in 2006.

The above mentioned project will be internally and externally (in particular DEAT) consulted. The participatory process will be conducted jointly by the Department of Water Affairs and Forestry and professional service providers skilled in this field. The responsibility for supervision of the project will rest primarily with the Directorate: Social and Ecological Services.

Detailed investigations into those functions which impact and manage the environment (refer Chapter 3) including plan, programme and project levels, will be initiated. During this process the inputs as well as the co-operative relationships with external partners will be further espoused and formalised through dialogue and the creation of working arrangements with relevant co-operative partners. This will include *inter alia* establishment of working arrangements with DEAT in respect of EIA's and other environmental evaluation systems for activities not listed under the current EIA regulations in terms of the ECA, but that have significant impacts on the environment. The above will be reported on in future EIMPs.

It is recommended that an environmental management education and awareness course be developed. Training in this regard should be initiated at project management and implementation levels within DWAF. It is also recommended that a database for environmental projects, activities and impacts be established for proper environmental monitoring and auditing purposes to ensure environmental compliance and performance.

CHAPTER 7: RECOMMENDATIONS FOR ENVIRONMENTAL PERFORMANCE

The First Edition EIMP should be viewed as the first step in an ongoing process of working towards sustainable environmental management within DWAF and not as an endpoint. This edition is thus more a *status quo* report and sets the background against which further development and improvement regarding environmental management will take place.

Due to the nature and wide scope of the Department's environmental functions, it must be realised that this process will be a long-term exercise that will require the identification of environmental management aspects within DWAF, right down to implementation level.

The results of the above, through the restructuring process, will have to be incorporated in business plans and translated into specific programmes (activities, objectives and targets). In many instances the Department has begun this exercise through initiatives associated with the implementation of the water and forestry legislation, but it will require several years of adjustment to be fully incorporated into business plans, staff appraisal programmes, performance contracts, auditing systems etc.

7.1 KEY ISSUES AND OPPORTUNITIES FOR IMPROVEMENT

During the compilation process of the EIMP, certain issues and opportunities for improvement were identified. These issues will be addressed via the process set out in Chapter 6, and are important for the further alignment of the Department's activities with the specific environmental objectives/goals of NEMA.

Some of the key issues include *inter alia*:

Co-operation with other organs of State:

DWAF needs to be involved from the outset of Departmental and Government planning initiatives. Fragmentation and lack of co-operation within the planning environment often results in other organs of State having a significant impact on WRM when DWAF is not timeously involved. Consequently it is important for project planning initiatives where water is a constraint or component/factor must occur in conjunction with DWAF.

The Constitution requires DWAF to foster co-operative governance with organs of State, particularly in the alignment and co-ordination of functions. Similarly, the role of Local Government and Provinces in water services can only be ensured through effective co-operative governance relationships. Existing systems and structures thus need to be reviewed and if necessary revised to ensure this.

The move towards integrated catchment management should be more pro-actively pursued, particularly for sectors that heavily impact on water resources such as, the agricultural sector in relation to its agricultural resources protection role (soil and wetlands).

Interaction of Government procedures and processes:

As noted previously the arrangements and linkages in Chapter 4 could not be evaluated nor prioritised, however an assessment must be made of the priority agreements/arrangements that should be addressed (and with which co-operative partners).

In addition, mechanisms should be developed or strengthened by which water and forestry related aspects are addressed and incorporated in other organs of State's procedures and processes. For example, partnerships should be established or strengthened in respect of planning and the co-ordination of functions such as monitoring and auditing of the impacts of processes such as land reform, mining, housing etc. on water and forestry resources.

Furthermore, DWAF should strengthen its relationships with Departments whose legislative processes or procedures could have profound impacts on water and forestry resources management, via e.g.:-

- establishing working arrangements in order to clarify roles, responsibilities and administrative functions; and
- reviewing, strengthening, co-ordinating or dismantling existing co-operative arrangements and structures where appropriate.

Rationalising co-operative arrangements and relationships:

It is evident from the chapter on co-operation that there are a multitude of arrangements and linkages with various Departments in respect of resource and environmental management.

Although the effectiveness of these arrangements has not yet been evaluated due to the current transitional nature of DWAF's functions, it is evident that co-ordination might be incomplete, duplication of efforts take place and that it may involve time and resources, possibly better spent if these arrangements could be rationalised.

Thus, the Department proposes that the CEC consider the establishment of regionally based environmental implementation and management committees. These committees should focus on implementation activities and should consist of multi-skilled representatives.

Rationalising the multitude of existing committees and formalising linkages (previously most likely dependent on individual officials co-operating and not "Departments") the issues of capacity and efficacy limitations may be addressed.

Consensus on environmental matters, authorisations and processes could be reached through such committees, still leaving the formalised decision making and implementation with the mandated or relevant Department (similar to the 'one stop shop' committees for stream flow reduction activities, refer SFRA LAACs, 4.2.4.2).

Environmental decision making:

Decision-makers should be made aware of the environmental consequences and impacts of its decisions and the need to include consideration of environmental management principles and requirements into deliberations.

Environmental impact assessments:

The DEAT should consider, via the law reform process applying class screening or general authorisations to activities and projects that are routine and repetitive in respect of receiving environments, types of impacts and mitigation measures.

Environmental officers:

Appropriate environmental management capacity should be provided in the implementation arm of the Department. In addition, a strategy needs to be developed to appropriately capacitate and resource the existing operational staff to undertake implementation, advisory and regulatory functions in respect of environmental management.

Environmental management communication and reporting strategy:

Roles, responsibilities and authorities relating to environmental management should be clearly defined and communicated, externally and internally.

Linkages with other reporting initiatives such as the Agenda 21 reporting, the National State of the Environment Report, the State of the Forest Report and the proposed State of the Water Resources Report, should be defined, rationalised and established.

In addition, the Department should 'market' its environmental management achievements to a wider audience in a more accessible manner.

Internal restructuring and organisation:

The Department's organisational structure and changes thereto should take cognisance of environmental management needs, in particular accommodation of an environmental auditing function.

In the interim existing audit procedures should include environmental performance evaluations. These performance appraisals should incorporate recognition of environmental management performance and compliance (see below).

Environmental performance monitoring and auditing:

With the development of an Integrated Environmental Management Framework for the DWAF (refer Chapter 6) particular consideration should be given to environmental performance management and the establishment of an auditing and enforcement programme/strategy for DWAF in respect of compliance and performance with environmental requirements (in particular NEMA) to address *inter alia*:-

- the testing and amendment of existing strategic goals and objectives against NEMA principles and environmental requirements;
- realignment of strategies, plans and programmes to achieve sustainability and implementation of the NEMA principles (in other words, addressing measures for compliance in more detail);
- investigating the application of environmental (in particular social) accountability and auditing principles and methodology within the DWAF; and
- development of indicators, monitoring and auditing procedures, etc.

Continuity in respect of environmental management practice and support:

Mechanisms along with necessary resources should be established and strengthened to attain continuity regarding environmental management practice and support throughout the entire Department.

Training and capacity building:

Environmental management, monitoring and auditing capacity and capabilities within DWAF, external water and forestry resource management institutions, contractors and service providers should be developed and strengthened.

The public as well as the different spheres of Government Department's knowledge and understanding of environmental legislation needs to be extended. This will improve compliance as well as performance, especially relating to the practicalities of implementing environmental legislation.

Incentives for compliance:

The Department should investigate the application of incentives for environmental compliance with DWAF policy and legislation (by others) which would assist in the move from forced compliance to self-compliance.

Disaster management:

Disaster management should be incorporated in the DWAF Standard (pro forma) Environmental Management Plan.

Managerial support:

Implementation of the EIMP and recommendations will require management commitment and support. This should be brought to fruition by ensuring that DWAF's key performance areas, outputs and responsibilities should include and address critical environmental considerations and requirements.

7.2 CONCLUSION

In view of the strategic approach to the First Edition EIMP as well as complex and transitional nature of Departmental processes and strategies, the Department could not be specific regarding time frames and resources for the proposals and recommendations forthcoming from the EIMP and this Chapter.

DWAF can, however, give the undertaking that where these recommendations are not currently being addressed, the Department will ensure that they will be considered and incorporated.

REFERENCES

Where relevant documentation is made available on the Department's website under (<http://www.dwaf.gov.za/Documents/Default.htm#Other>) – DWAF Environmental Implementation and Management Plan (EIMP).

Information from the following was employed to compile this document:

Questionnaires received and **discussion sessions** with the following components within DWAF:-

Chief Directorate Development
Chief Directorate Finance and Administration
Chief Directorate Forestry
Chief Directorate International Projects
Chief Directorate Planning
Chief Directorate Regions
Chief Directorate Scientific Services
Chief Directorate Water Services
Chief Directorate Water Use and Conservation

Documentation:-

Appropriate Practice in Water Supply and Sanitation, 1999. Conference, 14-17 March, 1999.

Compendium of Appropriate Practice in Peri-urban and Rural Water and Sanitation Delivery.

DEAT, 1999. Guidelines for Preparation of the First Edition Environmental Implementation Plans and Environmental Management Plans - To Support Co-operative Governance around Environmental Management in South Africa. Directorate: Environmental Planning and Impact Management. Version 1.0.

DEAT, 1999. National State of the Environmental Report - a Review.

DWA, 1999. Starter Requirements: Water Services Development Plans, Supplementary Guidelines for Local Municipalities.

DWA, 1999. Starter Requirements: Water Services Development Plans, Supplementary Guidelines for District Municipalities.

DWAF, 1996. Policy on Sustainable Forest Development in South Africa, White Paper.

DWAF, 1994. National Water Supply and Sanitation Policy, White Paper.

DWAF, 1996. Draft White Paper on Sanitation.

DWAF, 1997. National Forestry Action Plan.

DWAF, 1997. National Water Policy for South Africa, White Paper.

DWAF, 1997. The Magic of delivery: Water to 1 million persons, and 3,6 million trees planted in 1 000 days.

DWAF, 1999. Annotated Guide to key documents in community Water Supply and Sanitation. Edition 2.

DWAF, 1999. Framework for National Water Resource Strategy.

DWAF, 1999. National Water Act News Letter. First Edition. April 1999.

DWAF, 1999. National Water Act News Letter. Second Edition. November 1999.

DWAF, 1999. Water Quality Management Series. Policy Document U1.1. Managing the Water Quality Effect of Settlements:-The National Strategy. First Edition.

DWAF, 1999/2000. Annual Reports.

DWAF, 2000. Business Plans of the Chief Director Water Services.

DWAF, 2000. Development of a Generic Framework for Catchment Management, Draft. Directorate Catchment Management.

DWAF, 2000. Donor Assistance Administration Policy and Procedures - Draft.

DWAF, 2000. Implications of Catchment Management and Integrated Water Resource Management for Regional Offices and Head Office - Discussion Document. Final Draft, Directorate Catchment Management.

DWAF, 2000. National Water Act News Letter. Third Edition. March 2000.

DWAF, 2000. Paper on Stream Flow Reduction Activities – Water Use Licensing. Course on Ground Water and the National Water and Water Services Acts, University of Pretoria, June 2000.

DWAF, 2000. Public Participation for Catchment Management Agencies and Water User Associations. Guide 4 in the CMA/WUA Guide Series, Directorate Catchment Management.

DWAF, 2000. South African Institute of Civil Engineers Annual Congress. African Renaissance: The Role of Civil Engineering. Sharing Water Resources in Southern Africa. Directorate International Liaison.

DWAF, 2000. Strategic Considerations for DWAF – WRM Restructuring. "The Fish Eagle is Calling". Restructuring Information Document.

DWAF, 2000. Summary Information on International Donor Assistance. Directorate International Liaison.

DWAF, 2000. Water Services Brochure – First Draft.

DWAF, 2000/2001. Strategic Plan.

G.A. Visser, 2000. Bolweki Environmental. Environmental Law for Operation and Management Personnel, Revision 3, January 2000. Environmental Management Unit, University of Potchefstroom (SENRIO).

National Environmental Management Act, No. 107 of 1998.

National Forests Act, No. 84 of 1998.

National Veld and Forest Fire Act, No. 101 of 1998.

National Water Act, No. 36 of 1998.

Water SA, 1997. Engineering Week, Engineering Management's Information Magazine.

Water Services Act, No. 108 of 1997.

ANNEXURE I: INDICATORS

DEAT has initiated a participatory process for the development of Sustainable Development Indicators for purposes of and application towards the National Sustainable Development Strategy, the National State of the Environment Report (NSoER), as well as measuring implementation of the Departmental Environmental Implementation and Management Plans.

DWAF will assist the process by reviewing use and application of currently employed indicators and where required, to develop more appropriate "resource" specific indicators and other measurements to evaluate sustainability and environmental performance (*inter alia* through the process set out under Chapter 6).

At present the Department uses a wide range of indicators to measure and monitor the progress of its work. Many of the indicators are social, economic and ecological in nature but have not been specifically designed with environmental sustainability reporting in mind.

The following are examples of measurements currently in use within the **water sphere**:-

- measurements employed within the context of the Water Services National and Provincial Monitoring and Evaluation System which reflects the state of affairs for water services projects (e.g. business plans, institutional arrangements etc.), the National River Health Programme, National Bio-monitoring Programme, and the National Eutrophication Monitoring Programme;
- pollution incident investigations;
- dam safety investigations and reporting;
- irrigation audits;
- measurements employed within the context of the monitoring of physical and chemical properties of water; and
- measurements associated with the classification system and the Reserve which are of the most important indicators of sustainable development. Wherever this has been set and is maintained, it is envisaged that sustainable development will be achieved.

The Department is also responsible for provision of hydrological information. This information has traditionally focussed on streamflow and dam levels, along with monitoring of water quality in surface water and measurements of groundwater availability, quality and yield. Environmental indicators have recently been incorporated into the hydrological information system, allowing the Department to assess the status of the aquatic environment on an ongoing basis.

This information is essential for monitoring sustainability of water resources use, particularly in balancing the effect of water use against the need to ensure environmental stability. Environmental information is further needed for identifying adverse impacts where these may historically exist, or may emerge under changing water use patterns. The effects of appropriate rehabilitation actions can also be monitored through this type of information.

In addition, DWAF is carrying out social assessments, and is in the process of developing tools and systems to monitor and manage social and environmental (ecological) considerations associated with water resource development.

Relevant to **forestry**, over and above the indicators of achievement for the strategies contained in the NFAP, forestry indicators are being developed under the auspices of the National Forestry Advisory Council's Committee for Sustainable Forest Management. It is anticipated that these indicators will be available early 2002. These criteria and indicators for sustainable forest management will guide the development and revision of policies, legislation and national forest programmes. Furthermore, they will be applied to improve resource-use planning, to assess the outcome of forest management, to provide a basis for continuous improvement, and to assist with communicating the State of forests.

Current measurements employed in the forest sector are the process of establishing a national inventory of indigenous forests as well as the SAFCOL measurements of environmental performance, which include amongst other:-

- compliance with Forest Stewardship Council principles and criteria, i.e. actively giving attention to corrective action requests;

- excision of planted riparian zones and wetlands from plantation area, and maintenance of exotic species free riparian zones;
- maintenance of non-afforested areas (area planned, compared to area achieved);
- targeting the social environment by measuring injuries on duty and Disabling Injury Frequency Rate;
- checking progress and maintenance of conservation management plans (number of plantations who completed vegetation mapping, who completed conservation prescriptions, who completed conservation management plans);
- identification of areas of special interest;
- commitments from communities;
- existence and implementation of management plans;
- identification of appropriate use groups interested in "assets";
- identification and maintenance of Natural Heritage Sites; and
- identification of possible projects (social, ecological) on neighbouring land.

Further to the above, a number of indicators relevant to DWAF's mandate are included in the 1998 report to the United Nations Commission on Sustainable Development (UNCSD) and the results from testing of the CSD Indicators of Sustainable Development in South Africa. The NSoER, 1999 also contain indicators addressing sustainability. These indicators are in varying degrees of use for which the efficacy needs to be investigated.

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